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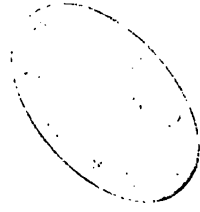
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ASTRONOMICAL AND METEOROLOGICAL  
OBSERVATIONS

MADE AT THE  
RADCLIFFE OBSERVATORY,  
OXFORD,  
IN THE YEAR 1858,

UNDER THE SUPERINTENDENCE OF  
MANUEL J. JOHNSON, M.A.,  
LATE RADCLIFFE OBSERVER :

REDUCED AND PRINTED  
UNDER THE SUPERINTENDENCE OF  
THE REV. ROBERT MAIN, M.A.,  
RADCLIFFE OBSERVER.

VOL. XIX.

*PUBLISHED BY ORDER OF THE RADCLIFFE TRUSTEES.*

OXFORD,  
J. H. AND J. PARKER.  
1861.

**OXFORD :**

**PRINTED BY JAMES WRIGHT, PRINTER TO THE UNIVERSITY.**

# ERRATA IN THE RADCLIFFE OBSERVATIONS.

## VOL. XI.

Page.	Ref. No.	Object.	Column.			
94	26	* R.A. $14^h 54^m 50^s$	Circle Reading	for	$33'$	read $28'$
"	"	"	Refraction	"	$-104''\cdot7$	" $-105''\cdot0$
"	"	"	Reduced Circle Reading	"	$31' 34''\cdot0$	" $26' 33''\cdot7$
"	"	"	Mean N.P.D.	"	$42' 50''\cdot0$	" $47' 50''\cdot3$
272	50	"	Mean N.P.D.	"	$42' 50''\cdot0$	" $47' 50''\cdot3$

## VOL. XII.

72	16	Groom. 3160	Name of Star	for	$S'' 207 (2d)$	read Groom. 3160
310	1702	"	"	dele	(2d)	

## VOL. XIII.

292	26	$\mu$ Arietis	Mean R.A.	for	$33^m$	read $34^m$
299	123	2359 B.A.C.	Name of Star	"	Piazzi vii. 9	" 2359 B.A.C.
"	"	"	Mean N.P.D.	"	$73^\circ 41'$	" $74^\circ 35'$

## VOL. XIV.

Introduction, Page v, line 27, for  $+0^h013$  read  $-0^h013$   
 Observations, Page 105, Note to No. 7, for S 2638 read S 2368

## VOL. XV.

Introduction, Page vii, line 26, for  $+0^h013$  read  $-0^h013$

## VOL. XVI.

Introduction, Page v, line 32, for  $+0^h013$  read  $-0^h013$

## VOL. XVII.

Introduction, Page vii, line 24, for  $+0^h013$  read  $-0^h013$   
 Observations, " 70, Collimation Error (Adopted), for  $-0^m003$  read  $-0^m03$   
     "               "               "  $-0^m002$  "  $-0^m02$   
     71               "               "  $+0^m02$  "  $-0^m02$   
     6\* Ref. No. 172,  $\gamma^1$  Andromedæ, Numb. of Obs. in N.P.D. for 4 read 1  
     "               " 173,  $\gamma^2$  Andromedæ, Mean N.P.D.               "  $21'$  "  $20'$   
     "               "               " Numb. of Obs. in N.P.D. insert 3

# ERRATA (*continued*).

## VOL. XVIII.

### *Astronomical Part.*

Introduction, Page vii, line 25, *for* + 0<sup>h</sup>.013 *read* — 0<sup>h</sup>.013

<i>Page.</i>	<i>Ref. No.</i>	<i>Object.</i>	<i>Column.</i>		
Observations,	55	5 21 Piscium	Observed Transit,	<i>for</i> 41 <sup>m</sup>	<i>read</i> 42 <sup>m</sup>
"	"	"	Mean R.A.	" 41 <sup>m</sup>	" 42 <sup>m</sup>
109	31	75 Draconis	Star's Name	" 7169 B.A.C.	" 75 Draconis
223	1175	B.A.C. 7169.	The N.P.D. belongs not to this star, but to 75 Draconis.		
241	1381	21 Piscium	Mean R.A.	<i>for</i> 41 <sup>m</sup>	<i>read</i> 42 <sup>m</sup>
248	6	57 Persei (North)	{ Numb. of Obs. in R.A. }	" 3	" 2
252	27	6108 B.A.C.		" 3	" 4
			{ Numb. of Obs. in N.P.D. }	" 3	" 4

### *Meteorological Part.*

Introduction, Page [xxvii], First Table, last column, opposite to June, *for* — 0<sup>o</sup>.08 *read* — 0<sup>o</sup>.88  
 ,, [xxxiii], Last Table, last column, opposite to E to S, *for* 0<sup>o</sup>.59 *read* 0<sup>o</sup>.74

## VOL. XIX.

<i>Page.</i>	<i>Ref. No.</i>	<i>Object.</i>	<i>Column.</i>		
2	2	R.H.C. 2673	Observed App. R.A.	<i>for</i> 5 <sup>h</sup>	<i>read</i> 17 <sup>h</sup>
"	11	Groom. 2283	"	" 3 <sup>h</sup>	" 15 <sup>h</sup>
"	31	R.H.C. "	"	" 5 <sup>h</sup>	" 17 <sup>h</sup>
3	6	Groom. 2283	"	" 3 <sup>h</sup>	" 15 <sup>h</sup>
4	5	θ <sup>1</sup> Orionis (1st)	Observed Transit	{ " 27 <sup>m</sup>	{ " 28 <sup>m</sup>
"	"	"	Observed App. R.A.		
"	20	R.H.C. "	"	" 5 <sup>h</sup>	" 17 <sup>h</sup>
5	6	N.P.D. 104° 52'	Name of Object	" 105° 2'	" 104° 52'
"	21	R.H.C. 2751	Observed App. R.A.	" 6 <sup>h</sup>	" 18 <sup>h</sup>
6	7	"	"	" 6 <sup>h</sup>	" 18 <sup>h</sup>
"	22	R.H.C. 2673	"	" 5 <sup>h</sup>	" 17 <sup>h</sup>
7	4	R.H.C. 2424	"	" 4 <sup>h</sup>	" 16 <sup>h</sup>
8	10	24 Ursæ Minoris	"	" 6 <sup>h</sup>	" 18 <sup>h</sup>
"	20	"	"	" 6 <sup>h</sup>	" 18 <sup>h</sup>
9	6	γ 1 L.	Observed Transit	" 20 <sup>m</sup>	" 21 <sup>m</sup>
"	"	"	Observed App. R.A.	" 22 <sup>m</sup>	" 23 <sup>m</sup>
13	33	α <sup>1</sup> Geminorum	{ Name of Object	{ " Castor	{ " α <sup>1</sup> Geminorum
14	24	"			
16	25	"			
19	20	Castor	"	" α <sup>2</sup> Geminorum	" Castor
31	25	Radcliffe 467	Cor. to Mean R.A.	" + 14 <sup>h</sup> .60	" + 14 <sup>h</sup> .40
32	17	B.A.C. 4143	"	" — 7 <sup>h</sup> .08	" — 7 <sup>h</sup> .05



# ERRATA (*continued*).

<i>Page.</i>	<i>Ref. No.</i>	<i>Object.</i>	<i>Column.</i>			
37	4	R.H.C. 2206	Cor. to Mean R.A.	for — 11° 89	read — 11° 80	
49	9	Lalande 35819-20	} Name of Object	,, B.A.C. 6542	,, Lalande 35817-20	}
„	18	„				
50	7	„				
64	8	Oeltz. Arg. 2462	„	„ Oeltz. Arg. 24628	„ Oeltz. Arg. 2462	
89	...	Groom. 750	Groom. 750, June 7	„ 15° 25	„ 14° 25	
113	...	S Capricorni	2	„ s Capricorni	„ S Capricorni	
130	8	R.H.C. 2859	Cor. to Mean N.P.D.	„ + 22° 0	„ — 22° 0	
131	24	$\chi^1$ Orionis	Name of Object	„ $\psi$	„ $\chi$	
132	7	B.A.C. 2590	Geocentric N.P.D.	„ 7'' 2	„ 17'' 2	
135	7	60 Cancri	Cor. to Mean N.P.D.	„ + 2° 0	„ — 2° 0	
„	8	$\pi^1$ Cancri	„	„ + 2° 3	„ — 2° 3	
„	9	B.A.C. 3199	„	„ — 10° 0	„ + 10° 0	
„	10	12 Leonis	„	„ + 2° 2	„ — 2° 2	
„	11	$\mu$ Leonis	„	„ + 3° 2	„ — 3° 2	
„	23	60 Cancri	„	„ + 2° 0	„ — 2° 0	
„	25	$\epsilon$ Leonis	„	„ + 3° 0	„ — 3° 0	
„	26	$\mu$ Leonis	„	„ + 3° 1	„ — 3° 1	
138	24	$\chi$ Virginis	Name of Object	„ $\psi$	„ $\chi$	
141	22	$\chi$ Virginis	„	„ $\psi$	„ $\chi$	
146	24	32 Cassiopeiae	Cor. to Mean N.P.D.	„ + 3° 8	„ — 3° 8	
147	14	$\epsilon^1$ Libræ	Name of Object	„ $\epsilon$ Libræ	„ $\epsilon^1$ Libræ	
„	16	$\phi$ Herculis	„	„ $\rho$	„ $\phi$	
155	30	Radcliffe 1474	Cor. to Mean N.P.D.	„ + 1° 1	„ — 1° 1	
156	21	22 Camelopardali	„	„ — 2° 1	„ + 2° 1	
158	24	$\chi$ Draconis	Name of Object	„ $\psi$ Draconis	„ $\chi$ Draconis	
159	9	13 Lyncis	Cor. to Mean N.P.D.	„ + 0° 2	„ — 0° 2	
160	16	43 Camelopardali	„	„ + 4° 9	„ — 4° 9	
163	19	B.A.C. 6896	Name of Object	„ B.A.C. 6986	„ B.A.C. 6896	
165	28	$\chi$ Capricorni	„	„ $\psi$ Capricorni	„ $\chi$ Capricorni	
173	11	Groom. 1884	Cor. to Mean N.P.D.	„ + 34° 3	„ — 34° 3	
176	9	Groom. 2213	„	„ + 36° 8	„ — 36° 8	
190	...	$\pi^1$ Cancri	2	<i>insert</i> Reflexion		
192	...	73 Leonis n	2	„ 73 Leonis h	„ 73 Leonis n	



# INTRODUCTION

TO THE

## ASTRONOMICAL OBSERVATIONS OF

1858.

---

**DURING** the year 1858 the Personal Establishment of the Observatory consisted of the Director, Manuel Johnson, Esq., M. A. ; and of three assistants, Mr. Norman Pogson (now Astronomer at Madras), Mr. Adolphus Quirling, and Mr. George Green. Throughout the year, with very few exceptions, Mr. Pogson made the observations with the Transit Instrument, and Mr. Quirling those with the Meridian Circle, while Mr. Green had the chief charge, under the immediate superintendence of the Director, of the Photographic Meteorological Observations. A lad named William Harris was also employed to assist in the Meteorological Reductions and other work.

No change whatever was made in the Instruments or in their mode of use. They consisted chiefly of the Heliometer (only in occasional use during the year) and of the Transit Instrument and Meridian Circle used in preceding years. With the Heliometer a few observations of double stars and of Tuttle's Comet were made by Mr. Quirling, which will be printed in a following volume. A Chronographic apparatus, similar to that at Greenwich, but smaller, was mounted on the pier of the Transit Instrument in the early part of the year, and a few observations were made with it by galvanic contact, but, on account of difficulty in the management of the clock, the use of it was soon discontinued.

Other Instruments for occasional use were, 1st, a telescope of 10 feet focal length, and 7 inches aperture, mounted equatorially on the south front of the Observatory, and provided with a journeyman clock, striking at the termination of each minute; and a 42 inch achromatic telescope, with triple object glass of  $3\frac{1}{4}$  inches. Observations and discoveries made with the 10 foot telescope in preceding years by

Mr. Pogson have occasionally appeared in the *Astronomische Nachrichten* and the Monthly Notices of the Royal Astronomical Society.

The ancient instruments out of use consist of two brass 8 foot Quadrants by Bird, and a 12 foot zenith sector, in connexion with which may be mentioned an old barometer by Bird, and an old but serviceable astronomical clock (still kept going) by Hawting of Oxford. There is also a 10 foot Newtonian telescope by Sir W. Herschel.

In addition to the clock previously mentioned, there are three others, used respectively with the Heliometer, the Transit Instrument, and the Meridian Circle, the two first by Dent, with mercurial compensation pendulums, and the latter by Shelton, with gridiron pendulum. All these are excellent instruments. There is also a clock with wooden pendulum, which stands in the hall, and serves to give time for the regulation of ordinary business.

A pocket Chronometer by Hardy is used for comparison of clocks and for occasional observations.

The Barometer used with the Heliometer is by Jones, and has a bag and adjustable float for the adjustment of the level of the cistern; the other is by Newman, and has a fiducial point, which in use is brought into contact with the surface of the mercury.

#### SECTION I.—*Observations with the Transit Instrument.* Pages 1 to 69.

The telescope of the Transit Instrument has an object-glass of 4 inches clear aperture, with a focal length of 8 feet. The magnifying power of the eye piece generally used is about 100. The Instrument is fully described in the 4th Volume of the *Radcliffe Observations*.

The observations were made by Mr. Pogson.

The *first* column of the printed observations contains the reference-numbers to the foot-notes on each page.

The *second* column contains the date of observation, commencing with the Sun's transit.

The *third* column contains the designations of the stars or other objects observed. For stars in the Nautical Almanac, the names there given are preferred to all others. For stars contained in Baily's Flamsteed, the Greek or Italic letter of Bayer there adopted is used, or in defect of that, Flamsteed's number, with the name of the constellation. For other stars, the British Association Catalogue is preferred to all other catalogues, and then, in order of preference, the numbers in the Catalogues of Groombridge, the Radcliffe Catalogue, Piazzzi, Bessel's Bradley, Baily's Flamsteed, Carrington's Red Hill Catalogue, Weisse's Bessel, Lalande and Lacaille (as published by the

British Association), Oeltzen's Argelander, and Rümker, are used. For variable stars the letters in ordinary use are employed, these letters being included in brackets to prevent confusion.

Stars which do not occur, or which have not been identified in any of the Catalogues mentioned above, are designated by their approximate N.P.D., given in general to the nearest minute.

The *fourth* column shews the number of wires over which a star has been observed when the observation was incomplete.

The wires are the same as those which have been in use since the year 1843, excepting that, for observing by galvanic contact, two additional ones were inserted in the year 1858, half way between the centre wire and each of the adjacent wires. They originally consisted of seven fixed vertical, 14" apart, and two horizontal wires, 30" apart; and of two wires moveable by separate micrometers for observation of the error of collimation.

The *fifth* column gives the time of transit over the mean of the five central wires at small intervals used for the observations by galvanic contact. All the observations throughout the year, though in general made over the seven wires at wide intervals, have been reduced to the mean of these five, because it was intended at the time that the Chronographic apparatus should be constantly used. Calling the wires in the order in which stars pass them, when the illuminating lamp is east, *a*, *b*, *c*, *d*, &c., the distance of each wire in time from the mean of the five is, for an equatorial star,

For	<i>a</i>	.....	+ 42'207
„	<i>b</i>	.....	+ 28'119
„	<i>c</i>	.....	+ 14'033
„	<i>d</i>	.....	+ 7'061
„	<i>e</i>	.....	— 0'012
„	<i>f</i>	.....	— 7'019
„	<i>g</i>	.....	— 14'063
„	<i>h</i>	.....	— 28'138
„	<i>i</i>	.....	— 42'202

These results were deduced from eleven observations of Circumpolar Stars in January, 1858, and have been used throughout the year for the reduction of imperfect transits.

For stars within 10° of the pole there has been used the accurate formula—

$$\text{Sine distance of star from mean of five wires} = \text{Sine Equatorial Interval} \times \text{Sec. Decl}^n.$$

For other stars the approximate formula has been used,

$$\text{Distance in time for star} = \text{Equatorial Interval} \times \text{Sec. Decl}^n.$$



The Sun was not observed during the year 1858. For the reduction of imperfect transits of the Moon the usual formula has been used, namely

$$\text{Correction to mean of wires} = \frac{3600 + 1}{3600} \times \frac{\sin \text{Geoc. Z.D.}}{\sin \text{App. Z.D.}} \times \text{Sec. Decl.}^n.$$

The *sixth* column contains the sum of the corrections to be applied to the transit over the mean of wires on account of the errors of collimation, level, and azimuth.

The *Error of Collimation* of the centre wire is determined by the observation with one of the micrometers, in reversed positions of the Transit Instrument, of two terrestrial marks, seen through lenses fixed in stone slabs inserted into the walls, at the north and south shutter openings of the Transit Room. The north mark is about 180 feet distant from the Observatory, the south one about 300 feet.

If  $e$  and  $w$  be the sums of the readings of the micrometer expressed in arc, corresponding to lamp east and lamp west, when the micrometer wire bisects the marks, and  $k$  the reading when it is in coincidence with the centre wire,  $\frac{e+w}{4} - k$  is the error of collimation of the centre wire. This requires correcting by  $-0''.19$  for diurnal aberration, and by  $\mp 0''.18$  for reduction to the mean of five wires, according as the lamp or perforated pivot is east or west. It should be observed that, of the two micrometers attached to the eye-piece, that one is used which is on the same side of the telescope as the perforated pivot or the illuminating lamp, and that its readings increase as the wires move towards the head of the micrometer.

If the error of collimation thus corrected and expressed in arc be  $c$ , then the correction to transits in seconds of time will be  $\frac{c}{15} \frac{1}{\sin \Delta}$  for a star whose N.P.D. is  $\Delta$ .

The *Error of Level* is determined by means of a hanging level, furnished with a divided ivory scale, the assumed value of one division being  $1''.5$ .

The axis of the Transit Instrument is generally levelled every evening when there are observations, the level being reversed four times. The readings of the scale at both ends of the bubble being taken, and those of the west end being considered positive, their algebraical sum divided by twice the number of reversions, if the diameters of the pivots be equal, will be the inclination of the line joining the centres of two pivots.

No sensible difference has been detected in the size of the pivots, and their figures, as far as the level is a test, appear to be faultless.

The correction in time to an observed transit, corresponding to a level error  $i$ , is  $\frac{i}{15} \frac{\cos(\Delta - \text{Colat.})}{\sin \Delta}$ , where  $\Delta$  is the North Polar Distance of the object, the error being considered positive when the western pivot is too high.

The *Azimuthal Error* of the Transit Instrument was determined by pairs of stars within  $6^\circ$  of the pole, observed at opposite culminations. The adopted Mean Right Ascensions of these stars will be found in the Catalogue given at pages 70 to 76.

If  $a$  and  $a' + 12^h$  be the Right Ascensions of two stars used thus for determining azimuthal errors, and  $d = a - a'$ ; and if  $t$  and  $t'$  represent the times of transit of the stars, the latter corrected for clock-rate if necessary, and  $t - t' = d$ ; then, denoting by  $n$  and  $n'$  the factors of azimuthal errors, that is, the values of  $\frac{\sin(\Delta - \text{Colat.})}{15 \sin \Delta}$  for the stars, the azimuthal error will be equal to  $\frac{d - d'}{n - n'}$ .

If the azimuthal error thus found be called  $m$ , considered positive when the western pivot is too far south, then its effect on transits of stars will be  $\frac{m}{15} \frac{\sin(\Delta - \text{Colat.})}{\sin \Delta}$ , and a table of the values of the error throughout the year, together with those of collimation and level, will be found at pages 77 to 81.

The *seventh* column contains the clock-errors actually applied to each transit, as deduced by combining the separate clock errors actually observed and recorded in the *eighth* column.

The assumed Right Ascensions of the stars used for determining clock errors have been, as in former years, derived from the Radcliffe Observations of preceding years, all stars whose N.P.D. are greater than  $40^\circ$  and larger than the 8th magnitude, which had been observed at least twice, being considered eligible for the purpose. The Right Ascensions are therefore referred fundamentally to the same equinox as those given in the Nautical Almanac for 1840. On this subject the Introduction to the *Radcliffe Catalogue of Stars*, pages 4 and 5, may be consulted.

The Table of Clock Errors and Rates actually adopted will be found at page 82 and following pages, which requires no explanation, except that, as the rates are deduced by comparison of the clock error corresponding to the mean of the group on any given day with the clock errors on the days of observation immediately preceding and following, there is given to each result a weight inversely proportional to the number of intervening days.

It has been previously stated that the clock was made by Dent. Its number is 1317.

The *ninth* column contains the Observed Apparent Right Ascensions of the objects observed, and is formed by the application of the instrumental and clock corrections given in preceding columns to the numbers in the fifth column, together with the correction for semi-diameter in the case of the Moon. The adopted times of passage of Moon's semi-diameter will be found in the foot-notes. They are taken from the Nautical Almanac, with a slight correction for difference of longitude.

The *tenth* column contains the corrections (with the proper signs) to Mean Right Ascension for Jan. 1, 1858. Those of stars in the Nautical Almanac are taken from that work by comparison of the Mean and Apparent Right Ascensions for each day required. Those in the *Catalogue of the British Association* are computed from the constants therein given, in conjunction with the values of log. A, log. B, log. C, and log. D, given in the Nautical Almanac. For other stars, the corrections have been computed from the formula given at page 363, of the Nautical Almanac for 1858, in conjunction with the values of log. A, log. B, log. C, and log. D.

Some notice will be found in the foot-notes, of the relative positions of the components of double stars. The ordinary notation has been used to mark the quadrant in which the unobserved star is situated, with regard to its companion. When these symbols are accompanied by figures, those which precede mark the estimated difference of N.P.D., and those which follow, the difference of R.A. These notices refer to the *real* positions, not to the positions as they appear in an inverting telescope.

SECTION II.—*List of Stars used in 1858 for obtaining the Clock and Azimuthal Errors; Instrumental Errors used in the Reductions; and Errors and Rates of the Transit-Clock.*—Pages 70 to 84.

These Tables have been previously referred to, and require little explanation. The *Assumed Right Ascensions of the Stars used for Clock Errors* are deduced from the Radcliffe Observations of former years, and the adopted equinox is based fundamentally upon that used in the Nautical Almanac of 1840, which does not differ much from that adopted in the Greenwich Catalogues. The Table of *Instrumental Errors* will show the constancy of the adjustments of the instrument, and the care which has been used to determine for every night of observations distinct values of the Errors of Level and Azimuth. The Table of *Errors and Rates of*

*made at the Radcliffe Observatory, Oxford, 1858.*   vii

*the Clock* gives the mean clock-error for every night, corresponding to the mean of the Sidereal times of transit of all stars used for the determination of clock errors.

The columns of "Clock's Loss in 24 Hours", and of "Adopted Daily Losing Rate", can be very readily verified.

SECTION III.—*Separate Results for Mean R.A. of Stars observed in the Year 1858.*—Page 85.

These results are extracted without alteration from the Section of *Observations with the Transit Instrument*, by the application of the *Corrections to Mean R.A.* given in the 10th column to the *Observed Apparent R.A.*, given in the 9th column.

The nomenclature is essentially the same as that used in Section I, excepting that if any errors have been detected in the preceding sections in naming the stars according to the rules previously explained, they are corrected in this section.

SECTION IV.—*Observations with the Meridian Circle; and Computations of Geocentric N.P.D.*—Page 119.

The *Meridian Circle* with which the Observations were made was constructed by Jones, on essentially the same principles as those employed in the Armagh Circle. It is 6 feet in diameter, and carries a telescope of the same length, provided with an object-glass of 4 inches clear aperture. The magnifying power used in ordinary observations is rather higher than 100. The divisions of the circle are on its flat side next to the pier, and are read by four micrometer-microscopes placed at intervals of 90° round the circle, at diameters inclined to the horizontal line at angles of 45°. They are 16 $\frac{3}{4}$ " in length, and are attached to the flat edge of the cylindrically shaped pier, the eye-pieces being in the same plane with the back of the pier. An additional protection from unequal warmth, whether of the observer's body, or of the lamp used for illumination, is provided by a ring of wood carried round the circle between the divided band and the interior surface of the pier, perforated only under the microscopes, and with small portions cut away, to allow the light from the lamp to fall on them. This wooden ring is not continued farther than the two lower microscopes. The four micrometer-microscopes are read for every observation.

A fuller description of the Instrument is given in the first volume of the *Radcliffe Observations*.

The observations were made by Mr. Quirling.

The *first* and *second* columns need no explanation.

The *third*, *fourth*, and *fifth* columns give the readings of the Barometer, and the exterior and interior Thermometers used for the computation of the refraction. The Barometer is by Newman, and is used as a standard (see *Meteorological Observations*, page [3]). The Thermometers have been in use since the year 1840, and were originally compared and found to agree with those formerly at the Royal Society. (*Radcliffe Observations*, Vol. I. p. 19.)

The *sixth* column contains the names of the stars or other objects observed, the same rules for nomenclature being used as in preceding sections.

The *seventh* column contains the concluded Circle Reading corresponding to the Mean of Microscopes, corrected for reduction to the meridian when necessary in the case of the Moon or of stars near the pole. It is the ordinary practice to observe by the Circle Clock (Shelton) the time of transit of each object over the centre wire, and to compare the Clock with the Transit Clock, for the purpose of attaining the deviation of the centre wire from the Meridian, or for obtaining accurately the Sidereal time at which an observation is made, when the star is not bisected at its passage across the central wire.

In such cases the correction for curvature is applied for all objects as deduced from the formula—

$$\text{Corr}^n. \text{ for curvature} = \frac{\sin^2 \frac{1}{2} \text{ Hour Angle} \times \sin 2 \text{ N.P.D.}}{\sin 1''}.$$

and, in the case of the Moon, the additional correction for change of N.P.D. between the time of observation and the time of meridian transit, is applied.

For computation the preceding formula may be more conveniently represented thus :

$$\text{Corr}^n. = \text{Number} (\log = 6.43569) \times \sin 2 \text{ N.P.D.} \times t^2,$$

where  $t$  is the interval in seconds of time between the time of observation and of meridian transit.

As a general rule, in reading off the Microscopes, the point of intersection of the cross-wires is brought upon the division next below the zero (care being taken always to turn the screw of the Micrometer in the same direction), unless the zero happens to be within one minute of the division above; then that division is used. In other cases, when the division above has been employed, mention is made in the notes.

The *eighth* column contains the correction to Circle reading for refraction, and the sign of its application will be understood by remem-



bering that increasing Circle Readings correspond to decreasing South Zenith Distances, and by attention to the other elements given at the foot of each page. The refractions are calculated from Bessel's Tables as given in the Appendix to the *Greenwich Observations* for 1853, but diminished in the proportion of 1 : 0.9967, in order to make the results identical with those of the Tables in Bessel's *Fundamenta Astronomiæ*, as these were found to be more consistent with the Radcliffe observations than those of the *Tabula Regiomontana*. (See *Radcliffe Observations*, Vol. XV, p. 24, &c.)

The *ninth* column contains the *minute and second* finally corrected for Runs, Index Correction, and Refraction, and, in the case of the Moon, for Parallax and Semi-diameter.

For runs of the microscopes, the adopted values on 5' will be found at the foot of each page, and a general table of them is given at page 177, as determined once a week for the mean of the four microscopes. The proportional part corresponding to the distance from the zeros of the microscopes at which the bisections have been made, is applied to each observation.

The zenith points, corresponding to index corrections, are given at the foot of each page, and are determined (or rather the nadir points) by observing the coincidence of the horizontal wire with its reflected image in a trough of mercury, by means of a Bohnenberger's eye-piece, in the usual way. A table of the weekly determinations of nadir point will be found at page 177, each being the mean of four observations, from which those actually used for particular days are interpolated. The values actually used are inserted at the foot of each page.

For the Moon, the horizontal equatorial parallax and the semi-diameter are interpolated by second differences for the time of Oxford transit from the numbers given in the *Nautical Almanac* without alteration. The parallax applied to the observation is computed from the formula—

$$\text{Parallax} = r \times \text{Equ. Hor. Par.} \times \sin \text{Distance from Geocentric Zenith},$$

where  $\log. r = 9.99910$ , and the angle of the vertical is assumed to be  $11' 10''$ , as computed from the ellipticity of the earth  $\frac{1}{300}$ . As the results are given only to one place of decimals, no sensible error is introduced by substituting the arcs for the sines in the computation of the parallax.

In all interpolations from the *Nautical Almanac*, the Longitude of the Observatory has been assumed to be  $5^m.2^s.6$ , west of Greenwich;

this being the result of a very careful chronometrical determination made in 1842, by the late Rev. Richard Sheepshanks.

It is stated at the foot of each page, that the assumed colatitude is  $38^{\circ} 14' 24'' \cdot 8$ . This is essentially the same as that determined by Mr. Johnson and given in the Introduction to the *Observations* for 1854, p. xxv.

SECTION V.—*Table of Nadir Points and of Corrections for Runs of the Microscopes of the Meridian Circle.*—Page 177.

The observations of the Nadir-point, and of the Runs of the Microscopes of the circle, are made usually on the Saturday of each week.

During the year 1858, no micrometer was attached to the telescope, and the observations of the reflected image of the fixed horizontal wire in a trough of mercury were made by bringing it into coincidence with the direct image, by the tangent screw of the clamp. The operation was repeated usually four times, the circle being read afresh at each observation, and care being taken at each alternate observation to make the coincidence by turning the tangent screw in the direction opposite to that used in the preceding. The reflected and direct images of the wire were not brought into contact on opposite sides, but the attempt has always been made to observe the actual position of coincidence of the images. A correction of  $+0'' \cdot 36$ , has been applied to the observed results for the assumed errors of the division of the circle which are under the microscopes.

The observations for runs were made each week for four readings of the pointer, at intervals of  $90^{\circ}$ , namely, for pointer readings,  $300^{\circ}$ ,  $30^{\circ}$ ,  $120^{\circ}$ , and  $210^{\circ}$ . By this process it is plain that the values of the runs for only one set of divisions have been obtained, since the same divisions are brought successively under the microscopes at each change of position. The results therefore are not good representatives of the mean error of the runs, as applicable to circle readings made in various positions of the circle in the course of observation.

The *tenth* column gives the *Geocentric N.P.D. of Centre* of the Objects observed. The concluded circle reading, as cleared of all instrumental corrections and all corrections depending on the position of the observer, can be deduced from the ninth column, reference being made to the seventh column for the degrees of circle reading, and the Geocentric N.P.D. is deduced immediately by subtracting the readings thus corrected from  $68^{\circ} 14' 24'' \cdot 8$ , or from the colatitude increased by  $30^{\circ}$ , the latter being approximately the value of the zenith point. The

sign of the subtraction should shew whether the star has been observed above or below pole, but by inadvertence the minus signs have been omitted in the cases of stars observed below the pole.

The *eleventh* column gives, with its proper sign, the *Correction to Mean N.P.D. for 1858, Jan. 1*, and the explanation given for the similar corrections to Mean R.A. will suffice for these corrections.

SECTION VI.—*Separate Results for Mean N.P.D. of Stars observed in the Year 1858.*—Page 178.

These results are deduced without any alteration from those of the Section of *Observations with the Meridian Circle*, by application of the *Corrections to Mean N.P.D. for 1858, Jan. 1*, given in the *eleventh* column, to the *Geocentric N.P.D. of Centre*, given in the *tenth* column.

The same rules for nomenclature are observed as in preceding Sections.

SECTION VII.—*Catalogue of Concluded Mean R.A. and Mean N.P.D. for 1858, Jan. 1, of Stars observed in the Year 1858; with the Annual Precessions.*—Page 209 to 254.

Many of the columns require no explanation, and notice will be taken only of those which require it.

The magnitudes of the stars are the means of those derived from observations in the year 1858, as they are given in Sections III and VI.

The Mean Right Ascensions for 1858, Jan. 1, are the means of those given for each star in Section III without any alteration.

The Precessions in R.A., for stars in the Nautical Almanac list, are taken from that work, and therefore include Proper Motion. For stars included in the British Association Catalogue, the Geometrical Precessions there given are set down, due regard being had to secular variation in bringing them up to 1858. For other stars, some are taken from the Radcliffe Catalogue, the secular variation being applied, and the rest have been computed with the same elements, which are those of the *Tabulæ Regiomontanæ*.

The same explanation will serve for the Precessions in N.P.D.

The Mean North Polar Distances for 1858, Jan. 1, are the means of those given for each star in Section VI, with the same corrections which have been used in preceding years, as resulting from the discussion in the Introduction to the fifteenth Volume of the *Radcliffe Observations*, page xviii, &c.

In combining the observations of stars below the pole with those

observed above the pole, equal weights have been given, as the number of instances of such combination is very small, and in each instance the number of observations below the pole is small, compared with the number above.

SECTION VIII.—*Observed Right Ascensions and North Polar Distances of the Moon's Centre, compared with the Nautical Almanac.*—Page 255.

The Mean Solar Times of Transit of Centre are computed by means of the Right Ascension or Sidereal Time, by adding together the Mean Solar Time at the transit of the First Point of Aries next preceding, and the equivalents in Mean Solar Time for the hour, minutes, and seconds of Sidereal Time, allowing  $5^m 2^s.6$  for West Longitude. The Observed Right Ascensions are extracted without alteration from the Section of *Observations with the Transit Instrument*; and the Observed North Polar Distances from the Section of *Observations with the Meridian Circle*, corrected for the discordance between direct and reflexion observations. The Seconds of N.A. are interpolated for difference of longitude between Oxford and Greenwich from the places given in the Section of *Moon Culminating Stars* of the Nautical Almanac. The other columns need no explanation.

ROBERT MAIN.

*Radcliffe Observatory, Oxford,*  
October 4, 1861.

**RADCLIFFE OBSERVATORY,  
OXFORD.**

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**OBSERVATIONS  
WITH  
THE TRANSIT INSTRUMENT,  
AND COMPUTATIONS  
OF  
APPARENT RIGHT ASCENSION.**

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**1858.**

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LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 1	R.H.C. 783 .....	9	5 22 57.61	-0.40	+66.80	+67.64	5 24 4.01	-27.50
2		R.H.C. 2673 S.P. .....	5	5 46 27.46	+1.12	66.82	*67.71	5 47 35.40	+25.90
3		2 Geminorum ...		5 57 3.95	+0.34	66.82	66.73	5 58 11.11	-1.69
4		7 Geminorum ...		6 5 12.99	+0.32	66.83	66.78	6 6 20.14	-1.70
5		$\mu$ Geminorum ...		6 13 16.62	+0.32	66.84	66.98	6 14 23.78	-1.70
6	Jan. 4	$\nu$ Arietis .....		2 30 35.72	+0.36	10.34		2 30 46.42	-0.67
7		$\gamma$ Ceti .....		2 35 46.95	+0.32	10.34	10.28	2 35 57.61	-0.79
8		B.A.C. 908 .....	5	2 49 50.85	+0.67	10.35		2 50 1.87	-2.23
9		$\alpha$ Ceti .....		2 54 41.89	+0.33	10.36	10.30	2 54 52.58	-0.89
10		$\epsilon$ Persei .....		2 58 40.46	+0.43	10.36	10.40	2 58 51.25	-0.91
11		Groom. 2283. S.P. .....	9	3 24 24.94	-0.66	10.38	*11.79	3 24 34.66	+13.79
12		22 Eridani .....		3 33 27.06	+0.30	10.38		3 33 37.74	-1.12
13		B.A.C. 1229 .....		3 49 41.46	+0.29	10.39	10.53	3 49 52.14	-1.27
14		$\nu$ Tauri .....		3 55 26.82	+0.34	10.40	10.35	3 55 37.56	-1.18
15		* N.P.D. 77° 4' ...		4 3 45.12	+0.35	10.41		4 3 55.88	-1.23
16		B.A.C. 1335 .....		4 12 44.36	+0.35	10.41		4 12 55.12	-1.26
17		B.A.C. 1522 .....	5	4 48 20.67	+0.49	10.44		4 48 31.60	-2.96
18		64 Eridani .....		4 53 10.83	+0.28	10.44		4 53 21.55	-1.46
19		B.A.C. 1565 .....	5	4 59 9.79	+0.62	10.44		4 59 20.85	-6.19
20		B.A.C. 1610 .....	5	5 6 30.33	+0.61	10.45		5 6 41.39	-5.93
21		R.H.C. 783 .....	9	5 23 50.67	+1.31	10.46	*12.67	5 24 2.44	-27.20
22		Groom. 1004 .....	9	5 49 33.17	+1.05	10.48	*11.13	5 49 44.70	-24.70
23	Jan. 9	22 Eridani .....		3 33 23.82	+0.04	13.95		3 33 37.81	-1.10
24		$\pi$ Eridani .....		3 39 13.16	+0.03	13.95		3 39 27.14	-1.17
25		R.H.C. 662 .....	9	4 31 12.61	-0.23	13.97	*13.61	4 31 26.35	-13.91
26		$\epsilon$ Aurigæ .....		4 47 32.55	+0.08	13.98	13.99	4 47 46.61	-1.55
27		R Leporis .....		4 52 56.10	+0.03	13.98	13.88	4 53 10.11	-1.45
28		$\epsilon$ Leporis .....		4 59 14.63	0.00	13.99	14.06	4 59 28.62	-1.56
29		$\lambda$ Eridani .....		5 2 8.60	+0.04	13.99	14.14	5 2 22.63	-1.44
30		$\sigma$ Columbae .....		5 12 9.85	-0.03	13.99		5 12 23.81	-1.71
31		R.H.C. *.....S.P. .....	5	5 14 28.43	+2.11	13.99	+13.19	5 14 44.53	+97.83
32		B.A.C. 1718 .....		5 22 21.69	-0.02	14.00		5 22 35.67	-1.69
33		$\theta^1$ Orionis (1st)...		5 28 5.06	+0.04	+14.00		5 28 19.10	-1.51
January. 1. The definition very bad.									
4. The clock was put one minute forward. Fine, but the stars very unsteady.									
9. An uncomfortable night: the instrument and all parts of the room trickling with water.									
1 The reference is to Mr. Carrington's Red-Hill Catalogue.					3 Scarcely visible. In thick fog.				
2 Faint.					4—5 Flaming.				
					30 Scarcely visible.				

LAMP EAST.									
No. for Ret.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 9	137 Tauri .....		5 44 6'00	+ 0'06	+ 14'01	+ 13'90	5 44 20'07	- 1'60
2		Groom. 1004 .....	9	5 49 32'39	- 0'35	14'01	*13'11	5 49 46'05	-24'36
3		7 Lyncis .....		6 22 32'49	+ 0'07	14'03		6 22 46'59	- 2'88
4		10 Lyncis .....	5	6 25 22'88	+ 0'07	14'03		6 25 36'98	- 3'40
5	Jan. 11	B.A.C. 979 .....	5	3 2 14'73	- 0'13	15'17		3 2 29'77	- 1'57
6		Groom. 2283 S.P. .....	9	3 24 17'11	+ 3'81	15'18	*17'81	3 24 36'10	+11'22
7		22 Eridani .....		3 33 22'15	+ 0'36	15'18		3 33 37'69	- 1'07
8		30 Eridani .....		3 45 26'53	+ 0'36	15'19	15'12	3 45 42'08	- 1'13
9		B.A.C. 1229 .....		3 49 36'65	+ 0'37	15'19	15'19	3 49 52'21	- 1'20
10		A' Tauri .....		3 56 4'00	+ 0'34	15'20	15'26	3 56 19'54	- 1'15
11		* N.P.D. 77° 4' .....		4 3 40'40	+ 0'35	15'20		4 3 55'95	- 1'19
12		B.A.C. 1308 .....	5	4 8 11'58	+ 0'36	15'20		4 8 27'14	- 1'45
13		φ Tauri .....		4 11 23'45	+ 0'34	15'20		4 11 38'99	- 1'27
14		ρ Tauri .....		4 25 33'35	+ 0'35	15'21		4 25 48'91	- 1'29
15		B.A.C. 1610 .....	5	5 6 26'41	- 0'18	15'23		5 6 41'46	- 5'76
16		R.H.C. 783 .....	9	5 23 48'44	- 2'32	15'24	*17'76	5 24 1'36	-26'35
17		B.A.C. 1808 .....		5 36 10'26	+ 0'36	15'25		5 36 25'87	- 1'59
18		137 Tauri .....		5 44 4'28	+ 0'35	15'25		5 44 19'88	- 1'61
19		α Orionis .....		5 47 14'95	+ 0'36	15'25	15'44	5 47 30'56	- 1'58
20		59 Orionis .....		5 50 47'98	+ 0'36	15'25		5 51 3'59	- 1'57
21		η Geminorum ...		6 6 4'58	+ 0'33	15'26	15'24	6 6 20'17	- 1'76
22		45 Aurigæ .....		6 10 0'86	+ 0'25	15'26		6 10 16'37	- 2'68
23		41 Camelopard ...	5	6 27 10'96	+ 0'20	15'27		6 27 26'43	- 3'49
24		B.A.C. 2175 (1st) .....		6 32 5'26	+ 0'21	15'28		6 32 20'75	- 3'27
25		43 Camelopard ...	5	6 38 11'13	+ 0'09	15'28		6 38 26'50	- 4'61
26		B.A.C. 2244 .....		6 44 11'46	+ 0'37	15'28		6 44 27'11	- 1'68
27		ε Canis Maj. ....		6 52 48'96	+ 0'37	15'29	15'10	6 53 4'62	- 1'70
28	Jan. 12	φ Tauri .....		4 11 22'52	+ 0'38	15'99		4 11 38'89	- 1'27
29		B.A.C. 1379 .....	5	4 21 10'75	- 0'32	15'99		4 21 26'42	- 5'26
30		B.A.C. 1399 .....	5	4 24 8'23	- 0'33	15'99		4 24 23'89	- 5'44
31		B.A.C. 1428 .....	5	4 29 35'71	- 0'06	16'00		4 29 51'65	- 3'89
32		Piazzi iv. 189 ...		4 39 28'60	+ 0'41	16'00	+ 16'00	4 39 45'01	- 1'34
33		B.A.C. 1496 .....	5	4 44 10'45	0'00	+ 16'00		4 44 26'45	- 3'88
January 11. The stars ill defined and unsteady.									
11 The faintest object possible to observe. 12 Very faint. 20 Companion invisible in the dark field.					28—30. Cloudy. 33. Cloudy.				

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 12	$\epsilon$ Aurigæ .....		4 51 32.55	+ 0.32	+ 16.01	+ 16.12	4 51 48.88	- 1.75
2		$\beta$ Eridani .....		5 0 37.22	+ 0.40	16.01	16.08	5 0 53.63	- 1.42
3		$\mu$ Leporis .....		5 6 18.48	+ 0.42	16.02	15.83	5 6 34.92	- 1.48
4		$\gamma$ Orionis .....		5 17 15.92	+ 0.40	16.02		5 17 32.34	- 1.48
5		$\theta^1$ Orionis (1st)...		5 27 2.52	+ 0.40	16.03		5 27 18.95	- 1.50
6	Jan. 13	B.A.C. 932 .....		2 52 7.19	+ 0.38	16.64		2 52 24.21	- 0.70
7		$\epsilon$ Persei .....		2 58 34.18	+ 0.34	16.64	16.64	2 58 51.16	- 0.78
8		Groom. 642 .....	9	3 20 15.22	- 1.53	16.65	*14.96	3 20 30.34	- 6.19
9		14 Tauri .....		3 35 18.90	+ 0.41	16.66		3 35 35.97	- 1.01
10		$\pi$ Eridani .....		3 39 10.03	+ 0.45	16.66		3 39 27.14	- 1.13
11		B.A.C. 1205 .....		3 44 40.19	+ 0.43	16.67		3 44 57.29	- 1.10
12		B.A.C. 1229 .....		3 49 35.18	+ 0.44	16.67	16.57	3 49 52.29	- 1.18
13		A <sup>1</sup> Tauri .....		3 56 2.50	+ 0.41	16.67	16.67	3 56 19.58	- 1.13
14		B.A.C. 1286 .....	5	4 4 9.52	+ 0.25	16.68		4 4 26.45	- 1.83
15		$\sigma^1$ Eridani .....		4 8 28.36	+ 0.43	16.68		4 8 45.47	- 1.23
16		$\phi$ Tauri .....		4 11 21.66	+ 0.41	16.68		4 11 38.75	- 1.26
17		B.A.C. 1399 .....	5	4 24 7.55	- 0.28	16.69		4 24 23.96	- 5.38
18		B.A.C. 1428 .....	5	4 29 35.53	- 0.01	16.69		4 29 52.21	- 3.86
19		$\beta$ Eridani .....		5 0 36.49	+ 0.44	16.70		5 0 53.63	- 1.41
20		R.H.C. n. .... S.P.	9	5 14 20.44	+ 11.02	16.71	*15.00	5 14 48.17	+ 95.70
21		$\gamma$ Orionis .....		5 17 15.39	+ 0.43	16.71		5 17 32.53	- 1.48
22		$\theta^1$ Orionis (2d)...		5 28 2.19	+ 0.43	16.72		5 28 19.34	- 1.50
23		B.A.C. 1881 .....	5	5 47 22.61	+ 0.18	16.73		5 47 39.52	- 3.70
24		2 Geminorum ...		5 57 53.93	+ 0.41	16.73	16.74	5 58 11.07	- 1.75
25		$\gamma$ Orionis .....		6 6 14.12	+ 0.41	16.74	16.83	6 6 31.27	- 1.72
26		$\gamma$ Geminorum ...		6 29 15.09	+ 0.42	16.75	16.74	6 29 32.26	- 1.75
27		B.A.C. 2175 .....		6 32 3.75	+ 0.27	16.75		6 32 20.77	- 3.30
28	Jan. 14	$\epsilon$ Persei .....	5	2 58 33.51	+ 0.33	17.33	17.30	2 58 51.17	- 0.76
29		Groom. 642 .....	9	3 20 14.17	- 3.02	.....	+ *17.25	.....	.....
30		B.A.C. 1110 .....		3 29 13.60	+ 0.55	17.37		3 29 31.52	- 1.01
31		14 Tauri .....		3 35 18.15	+ 0.49	17.37		3 35 36.01	- 1.00
32		B.A.C. 1187 .....		3 41 12.56	+ 0.48	17.38		3 41 30.42	- 1.04
33		B.A.C. 1205 .....		3 44 39.63	+ 0.55	+ 17.38		3 44 57.56	- 1.09
1—4 Cloudy.				27 Close companion (9.0) sf.					
5 Cloudy; scarcely distinguishable.									

## LAMP EAST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 14	$\lambda$ Tauri .....		3 52 32.35	+ 0.52	+ 17.38	+ 17.24	3 52 50.25	- 1.10
2		B.A.C. 1286 .....	5	4 4 8.48	+ 0.17	17.39		4 4 26.04	- 1.81
3		$\phi$ Tauri .....		4 11 20.93	+ 0.47	17.39		4 11 38.79	- 1.25
4		B.A.C. 1347 .....		4 14 39.22	+ 0.48	17.39	17.36	4 14 57.09	- 1.26
5		$\nu$ Eridani .....		4 27 40.39	+ 0.61	17.40		4 27 58.40	- 1.48
6		* N.P.D. 105° 2'. ..	6	4 31 50.69	+ 0.59	17.40		4 32 8.68	- 1.36
7		$\epsilon$ Aurigæ .....		4 47 28.63	+ 0.44	17.41	17.53	4 47 46.48	- 1.53
8		$\epsilon$ Aurigæ .....		4 51 31.09	+ 0.37	17.41	17.52	4 51 48.87	- 1.74
9	Jan. 18	$\alpha$ Tauri .....		3 55 58.62	+ 0.35	20.46	20.58	3 56 19.43	- 1.10
10		* N.P.D. 43° 35'. ..		4 6 10.65	+ 0.32	20.46		4 6 31.43	- 1.36
11		B.A.C. 1335 .....		4 12 33.98	+ 0.36	20.46		4 12 54.80	- 1.19
12		B.A.C. 1347 .....		4 14 36.23	+ 0.35	20.46	20.43	4 14 57.04	- 1.21
13		B.A.C. 1379 .....	5	4 21 6.49	- 0.08	20.47		4 21 26.88	- 4.82
14		$\rho$ Tauri .....		4 25 28.19	+ 0.36	20.47		4 25 49.02	- 1.25
15		Aldebaran .....		4 27 27.03	+ 0.36	20.47	20.41	4 27 47.86	- 1.26
16		B.A.C. 1661 .....		5 14 18.29	+ 0.35	20.49	20.46	5 14 39.13	- 1.44
17		B.A.C. 1706 .....	5	5 20 30.03	+ 0.11	20.49		5 20 50.63	- 4.76
18		$\theta$ Orionis (1st)...		5 27 58.10	+ 0.35	20.50		5 28 18.95	- 1.49
19		B.A.C. 1808 .....		5 36 5.05	+ 0.36	20.50		5 36 25.91	- 1.57
20		Groom. 1004 .....	5	5 49 25.14	- 1.21	20.51	*20.37	5 49 44.44	- 23.66
21		R.H.C. 2751 S.P. ..	5	6 16 42.17	+ 1.63	20.52	*20.44	6 17 4.32	+ 18.84
22		$\gamma$ Lyncis .....		6 23 45.16	+ 0.29	20.52		6 24 5.97	- 3.00
23		$\xi$ Canis Maj. ...		6 28 47.23	+ 0.34	20.52	20.51	6 29 8.09	- 1.66
24		$\eta$ Lyncis (1st)...		6 33 22.42	+ 0.36	20.52		6 33 43.30	- 3.32
25		43 Camelopard ...	5	6 38 6.27	+ 0.20	20.53		6 38 27.00	- 4.65
26		B.A.C. 2244 .....		6 44 6.46	+ 0.34	20.53		6 44 27.33	- 1.69
27	Jan. 19	$\omega$ Tauri .....		4 0 33.48	+ 0.39	21.05	21.10	4 0 54.92	- 1.11
28		$\omega$ Tauri .....		4 8 36.26	+ 0.38	21.06		4 8 57.70	- 1.17
29		B.A.C. 1335 .....	5	4 12 33.42	+ 0.40	21.06		4 12 54.88	- 1.18
30		$\delta$ Tauri .....		4 15 34.60	+ 0.39	21.06	21.01	4 15 56.05	- 1.19
31		$\theta$ Tauri .....		4 20 13.25	+ 0.39	21.06		4 20 34.70	- 1.21
32		$\rho$ Tauri .....		4 25 27.32	+ 0.40	21.07		4 25 48.79	- 1.24
33		Aldebaran .....		4 27 26.26	+ 0.40	+ 21.07	+ 21.14	4 27 47.73	- 1.26

January 19. Heavily clouded throughout the whole evening.

5 Faint.

6 Scarcely visible for haze.

7—8 Thick fog.

9 Cloudy.

13—15 Scarcely discernible for thick clouds.

17 Cloudy.

20 Cloudy.

21 Hazy.

26 Hazy and faint.

## Observations with the Transit Instrument

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 19	54 Eridani.....		4 33 53.99	+ 0.39	+ 21.07		4 34 15.45	- 1.35
2		$\pi^1$ Orionis.....		4 41 47.86	+ 0.39	21.07		4 42 9.32	- 1.31
3		$\beta$ Eridani.....		5 0 32.25	+ 0.41	21.08	+ 21.00	5 0 53.74	- 1.38
4		Capella.....		5 5 52.71	+ 0.35	21.08	21.10	5 6 14.14	- 1.89
5	Jan. 20	Groom. 1004.....	5	5 49 24.64	- 1.83	21.86	*21.22	5 49 44.67	-23.32
6		43 Aurigæ.....		6 7 21.68	+ 0.36	21.87	22.01	6 7 43.91	- 2.52
7		R.H.C. 2751 S.P.	5	6 16 40.97	+ 2.24	21.88	*21.22	6 17 5.09	+18.60
8		9 Lyncis.....		6 23 43.86	+ 0.31	21.88		6 24 6.05	- 3.00
9		$\gamma$ Geminorum ...		6 29 10.05	+ 0.42	21.88	21.81	6 29 32.35	- 1.78
10		12 Lyncis (1st)...		6 33 21.05	+ 0.29	21.88		6 33 43.22	- 3.32
11		58 Aurigæ.....		6 40 23.42	+ 0.37	21.89	21.82	6 40 45.68	- 2.36
12	Jan. 21	B.A.C. 1335.....		4 12 32.02	+ 0.37	22.42		4 12 54.81	- 1.15
13		$\kappa^1$ Tauri.....		4 16 36.20	+ 0.36	22.42		4 16 58.98	- 1.20
14		83 Tauri.....		4 22 16.36	+ 0.37	22.42		4 22 39.15	- 1.21
15		R.H.C. 662.....		4 31 1.63	- 0.53	22.42	*22.70	4 31 23.52	-11.73
16		Piazzi iv. 189 ...		4 39 22.16	+ 0.37	22.43	22.42	4 39 44.96	- 1.28
17		$\pi^1$ Orionis.....		4 41 46.52	+ 0.36	22.43	22.35	4 42 9.31	- 1.30
18		B.A.C. 1510.....	5	4 46 29.85	+ 0.21	22.43		4 46 52.49	- 3.58
19		R Leporis.....		4 52 47.35	+ 0.35	22.43	22.23	4 53 10.13	- 1.37
20		$\epsilon$ Leporis.....		4 59 5.86	+ 0.34	22.43	22.40	4 59 28.63	- 1.47
21		$\lambda$ Eridani.....		5 1 59.76	+ 0.35	22.44	22.61	5 2 22.55	- 1.38
22		R.H.C. 2673. S.P.	5	5 47 13.96	+ 1.73	22.45	*22.76	5 47 38.14	+23.59
23		66 Orionis.....		5 57 7.40	+ 0.36	22.20	22.03	5 57 29.96	- 1.58
24		72 Orionis.....		6 6 53.00	+ 0.37	22.20	22.32	6 7 15.57	- 1.71
25		$\mu$ Geminorum ...		6 14 1.38	+ 0.36	22.21	22.29	6 14 23.95	- 1.81
26		$\beta$ Canis Maj.....		6 16 6.06	+ 0.34	22.21	22.19	6 16 28.61	- 1.62
27		78 Orionis.....		6 19 39.06	+ 0.36	22.21	22.36	6 20 1.63	- 1.63
28		8 Lyncis.....		6 24 23.20	+ 0.31	22.21		6 24 45.72	- 3.43
29		10 Lyncis.....		6 25 14.18	+ 0.31	22.21		6 25 36.70	- 3.45
30		56 Aurigæ (1st)...		6 36 9.84	+ 0.34	22.22	22.24	6 36 32.40	- 2.41
31		56 Aurigæ (2d)...		6 36 11.54	+ 0.34	22.22	22.06	6 36 34.10	- 2.41
32		B.A.C. 2303.....		6 55 3.60	+ 0.33	22.22		6 55 26.15	- 1.69
33		R Canis Min.....		7 0 33.14	+ 0.37	+ 22.23	+ 22.21	7 0 55.74	- 1.80
January 20. A high wind. Cloudy during the early part of the night.									
13 Cloudy. 19 Crimson.					23—33 These are the first transits registered on the Chronograph: they were taken over the five close central wires. 32 Faint.				

## LAMP EAST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 21	Procyon.....		7 31 30.95	+ 0.36	+ 22.50	+ 22.57	7 31 53.81	- 1.79
2		Pollux .....		7 36 16.56	+ 0.36	22.50	22.54	7 36 39.42	- 2.14
3	Jan. 23	Groom. 750 .....	5	3 52 56.02	- 0.31	23.66	*24.77	3 53 19.37	- 5.85
4		R.H.C. 2424 S.P. .....	5	4 6 5.98	+ 0.98	23.67	*24.73	4 6 30.63	+ 4.87
5		$\kappa^1$ Tauri.....		4 16 34.85	+ 0.31	23.67		4 16 58.83	- 1.18
6		83 Tauri .....		4 22 15.02	+ 0.32	23.67		4 22 39.01	- 1.18
7		Aldebaran .....		4 27 23.78	+ 0.32	23.68	23.66	4 27 47.78	- 1.22
8		$\sigma^2$ Tauri .....		4 30 46.68	+ 0.32	23.68	23.64	4 31 10.68	- 1.25
9		Piazzi iv. 189 ...		4 39 20.96	+ 0.31	23.68	23.67	4 39 44.95	- 1.27
10		* N.P.D. 105° $\sigma^1$ ..		4 51 46.18	+ 0.29	23.39	23.08	4 52 9.86	- 1.35
11		R Leporis .....		4 52 46.40	+ 0.29	23.40	23.22	4 53 10.09	- 1.35
12		$\epsilon$ Leporis .....		4 59 4.94	+ 0.27	23.40	23.37	4 59 28.61	- 1.45
13		Rigel .....		5 7 20.64	+ 0.30	23.40	23.34	5 7 44.34	- 1.38
14		111 Tauri .....		5 15 46.16	+ 0.30	23.41	23.45	5 16 9.87	- 1.49
15		B.A.C. 1706 .....		5 20 26.69	+ 0.16	23.41		5 20 50.26	- 4.59
16		$\theta^1$ Orionis (1st)...		5 27 55.20	+ 0.29	23.41		5 28 18.90	- 1.46
17		$\theta^1$ Orionis (4th)...		5 27 56.76	+ 0.29	23.41	23.31	5 28 20.46	- 1.46
18		$\eta$ Leporis .....	4	5 49 33.98	+ 0.29	23.42	23.60	5 49 57.69	- 1.54
19		38 Aurigæ .....		5 52 41.98	+ 0.30	23.42	23.67	5 53 5.70	- 2.12
20		$\eta$ Geminorum ...		6 5 56.36	+ 0.30	23.43	23.51	6 6 20.09	- 1.78
21		45 Aurigæ .....		6 9 52.58	+ 0.29	23.43		6 10 16.30	- 2.68
22		$\beta$ Canis Maj. ...		6 16 4.72	+ 0.28	23.43	23.58	6 16 28.43	- 1.61
23		B.A.C. 2162 .....		6 28 57.30	+ 0.25	23.73		6 29 21.28	- 1.71
24		56 Aurigæ (2d)...		6 36 10.12	+ 0.30	23.73	23.52	6 36 34.15	- 2.41
25		R Canis Min. ...		7 0 31.59	+ 0.31	23.74	23.83	7 0 55.64	- 1.81
26		52 Geminorum ...		7 5 38.53	+ 0.32	23.75		7 6 2.60	- 2.03
27		$\iota$ Geminorum.....		7 16 32.10	+ 0.31	23.75	23.95	7 16 56.16	- 2.11
28	Jan. 25	* N.P.D. 43° 35' ..		4 6 6.50	+ 0.34	24.64		4 6 31.48	- 1.26
29		$\delta^1$ Tauri.....		4 15 30.96	+ 0.32	24.64	24.67	4 15 55.92	- 1.14
30		$\rho$ Tauri .....		4 25 23.78	+ 0.32	24.65	*	4 25 48.75	- 1.20
31		B.A.C. 1428 .....		4 29 26.37	+ 0.30	24.65		4 29 51.32	- 3.26
32		$\tau^1$ Tauri.....		4 33 17.52	+ 0.32	24.65	24.56	4 33 42.49	- 1.27
33		$\tau^2$ Tauri.....		4 33 19.94	+ 0.32	+ 24.65	+ 24.56	4 33 44.91	- 1.27

1—2 Observed by the usual method over the seven wires.

3—5 Indistinct.

10—22 Registered on the Chronograph; the five close wires used.

18—19 Observed by Mr. Johnson.

23—27 Observed by the usual method over the seven wires.

28—33 Registered on the Chronograph; the five close wires used.

28—29 Hazy.

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 25	$\pi$ Orionis .....		4 41 44.44	+ 0.31	+ 24.65	+ 24.44	4 42 9.40	- 1.26
2		$\epsilon$ Aurigæ .....		4 47 21.52	+ 0.33	24.65	24.67	4 47 46.50	- 1.45
3		$\gamma$ 1 L. ....		5 3 2.48	+ 0.33	24.66		5 4 45.40	
4		$\eta$ 11 Tauri .....		5 15 44.78	+ 0.32	24.67	24.79	5 16 9.77	- 1.47
5		22 Camelopard ...		5 26 43.56	+ 0.33	24.67		5 27 8.56	- 2.41
6		B.A.C. 1808 .....		5 36 0.68	+ 0.33	24.68		5 36 25.69	- 1.56
7		136 Tauri .....		5 44 0.72	+ 0.33	24.68		5 44 25.73	- 1.73
8		139 Tauri .....		5 48 47.64	+ 0.33	24.68		5 49 12.65	- 1.74
9		36 Camelopard ...		5 58 12.18	+ 0.33	24.69		5 58 37.20	- 3.57
10		24 Ursæ Min. S.P.		6 22 27.50	+ 0.86	24.70	*24.88	6 22 53.06	+26.64
11		51 Cephei .....		6 32 45.20	- 0.08	24.70	*24.85	6 33 9.82	-31.25
12		$\zeta$ Geminorum ...		6 55 17.82	+ 0.33	24.71	24.95	6 55 42.86	- 1.93
13	Jan. 26	R.H.C. 727 .....		4 55 50.34	- 0.19	25.29	*24.58	4 56 15.44	-11.81
14		$\mu$ Leporis .....		5 6 9.24	+ 0.28	25.29	25.11	5 6 34.81	- 1.38
15		$\lambda$ Aurigæ .....		5 8 45.62	+ 0.32	25.29	25.08	5 9 11.23	- 1.70
16		136 Tauri .....		5 44 0.24	+ 0.32	25.31		5 44 25.87	- 1.73
17		139 Tauri .....		5 48 47.16	+ 0.31	25.32		5 49 12.79	- 1.73
18		38 Aurigæ .....		5 52 40.30	+ 0.31	25.32	25.32	5 53 5.93	- 2.10
19		$\gamma$ 1 L. ....		6 12 35.64	+ 0.32	25.32		6 14 19.67	
20		24 Ursæ Min. S.P.		6 22 27.54	+ 1.27	25.33	*24.59	6 22 54.14	+26.52
21		B.A.C. 2175 (2d)		6 31 55.80	+ 0.29	25.33		6 32 21.42	- 3.29
22		12 Lyncis (2d) ...		6 33 18.62	+ 0.29	25.33		6 33 44.24	- 3.30
23		38 Geminorum ...		6 46 14.10	+ 0.32	25.34	25.43	6 46 39.76	- 1.80
24		$\gamma$ Canis Maj. ....		6 56 56.16	+ 0.29	25.34	25.39	6 57 21.79	- 1.67
25		B.A.C. 2331 .....		6 59 52.64	+ 0.31	25.34	25.51	7 0 18.29	- 2.12
26		$\tau$ Geminorum ...		7 1 42.32	+ 0.31	25.35	25.41	7 2 7.98	- 2.13
27		44 Camelopard ...		7 5 57.56	+ 0.29	25.35		7 6 23.20	- 3.53
28		$\delta$ Geminorum ...		7 11 14.74	+ 0.31	25.35	25.33	7 11 40.40	- 1.99
29		$\epsilon$ Geminorum ...		7 16 30.70	+ 0.32	25.35	25.36	7 16 56.37	- 2.13
30	Jan. 27	Aldebaran .....*		4 27 21.40	+ 0.43	25.94	25.90	4 27 47.77	- 1.19
31		$\tau$ Tauri .....		4 33 16.04	+ 0.41	25.95	25.92	4 33 42.40	- 1.24
32		$\tau$ Tauri .....		4 33 18.56	+ 0.41	25.95	+ 25.82	4 33 44.92	- 1.24
33		B.A.C. 1510 .....		4 46 25.91	- 0.01	+ 25.96		4 46 51.86	- 3.31
January 25—27. The observations were registered on the Chronograph.									
3 Semi-diameter applied, + 77".93. 7—9 Hazy. 10—12 Cloudy. 17—20 Cloudy.					19 Semi-diameter applied, + 78".39. 23 Scarcely visible through thick clouds. 24—29 Cloudy. 30 Cloudy.				

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Jan. 27	Radcliffe 1377 ...	3	4 55 49.93	- 1.47		+ 26.07	.....	.....
2		$\beta$ Can. Maj. ....		6 16 2.08	+ 0.46	+ 26.01	26.03	6 16 28.55	- 1.60
3		$\nu$ Geminorum ...		6 20 7.24	+ 0.41	26.01	26.13	6 20 33.66	- 1.79
4		$\tau$ Geminorum ...		7 1 41.62	+ 0.38	26.03	26.04	7 2 8.03	- 2.13
5		$\delta$ Geminorum ...		7 11 13.88	+ 0.40	26.04	* 26.10	7 11 40.32	- 1.99
6		$\eta$ 1 L. ....		7 20 18.28	+ 0.40	26.04		7 22 1.54	
7	Jan. 28	Aldebaran .....		4 27 20.50	+ 0.43	26.94	26.79	4 27 47.87	- 1.18
8		$\mu$ Eridani .....		4 37 58.12	+ 0.44	26.95	26.89	4 38 25.51	- 1.21
9		(R) Leporis .....		4 52 42.58	+ 0.45	26.96	26.84	4 53 9.99	- 1.31
10		$\iota$ Leporis .....		4 56 19.54	+ 0.45	26.96	26.91	4 56 46.95	- 1.36
11		$\iota$ 3 Orionis .....	4	4 59 25.48	+ 0.44	26.96		4 59 52.88	- 1.33
12		$\theta^1$ Orionis (2d) ...		5 27 51.72	+ 0.44	26.98		5 28 19.14	- 1.43
13		$\theta^1$ Orionis (4th) ...		5 27 52.82	+ 0.44	26.98	27.07	5 28 20.24	- 1.43
14		$\alpha$ Columbe .....		5 34 4.82	+ 0.45	26.98	26.99	5 34 32.25	- 1.56
15		$\zeta$ Geminorum ...	4	6 55 15.66	+ 0.42	27.04	27.01	6 55 43.12	- 1.92
16		* N.P.D. 73° 2' ...		8 4 29.80	+ 0.42	27.08	27.09	8 4 57.30	- 2.02
17		$\eta$ 1 L. ....		8 26 11.32	} + 0.41	27.10		8 27 52.55	
18		$\eta$ 2 L. ....		8 28 38.75					
19		$\gamma$ Cancri .....		8 34 38.36	+ 0.41	27.10		8 35 5.87	- 2.13
20		$\rho^1$ Cancri .....		8 43 30.60	+ 0.41	27.11	27.28	8 43 58.12	- 2.30
21		$\rho^2$ Cancri .....		8 43 42.62	+ 0.41	27.11	27.27	8 44 10.14	- 2.30
22		$\phi$ Cancri .....		8 47 44.48	+ 0.43	27.11		8 48 12.02	- 1.97
23		$\nu$ Cancri .....		8 54 0.44	+ 0.42	27.11		8 54 27.97	- 2.21
24	Feb. 1	58 Eridani .....		4 40 44.90	+ 0.43	29.77	29.68	4 41 15.10	- 1.20
25		B.A.C. 1522 .....		4 48 1.02	+ 0.33	29.77		4 48 31.12	- 2.33
26		Radcliffe 1377 ...		4 55 44.34	+ 0.47	29.77	* 29.70	4 56 13.64	- 10.64
27		$\lambda$ Aurigæ .....		5 8 40.76	+ 0.43	29.78	29.76	5 9 10.97	- 1.63
28		B.A.C. 1661 .....		5 14 8.86	+ 0.44	29.78	29.71	5 14 39.08	- 1.35
29		$\gamma$ Orionis .....		5 17 2.08	+ 0.45	29.78		5 17 32.31	- 1.38
30		B.A.C. 1706 .....		5 20 20.00	+ 0.23	29.78		5 20 50.01	- 4.20
31		$\theta^1$ Orionis (2d) ...		5 27 48.74	+ 0.43	29.78		5 28 18.95	- 1.39
32		$\theta^1$ Orionis (4th) ...		5 27 50.08	+ 0.43	29.78	+ 29.78	5 28 20.29	- 1.39
33		$\alpha$ Columbe .....		5 34 2.32	+ 0.41	+ 29.79		5 34 32.52	- 1.50
January 28. The Chronograph was used from this date till February 24.									
1—6 Cloudy. 4 Scarcely visible. 6 Semi-diameter applied, + 76.82. 7—8 Cloudy. 9 Fine crimson.					10—13 Cloudy. 14 Very faint. 15—23 Cloudy. 18 + 0.19 has been applied to the transit of 2 L. for defective illumination.				



LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 1	Rad. 3796. ... S.P.		5 46 35.86	+ 2.03	+ 29.79	+ *30.00	17 47 7.68	+ 21.08
2		Rad. 3798. ... S.P.		5 47 9.50	+ 2.03	29.79	*29.39	17 47 41.32	+ 21.18
3		45 Aurigæ .....		6 9 46.06	+ 0.40	29.80		6 10 16.26	- 2.61
4		μ Geminorum ...		6 13 53.84	+ 0.44	29.80	29.91	6 14 23.88	- 1.77
5		6 Lyncis .....		6 17 59.68	+ 0.38	29.80		6 18 29.86	- 2.99
6		8 Lyncis .....		6 24 15.38	+ 0.36	29.81		6 24 45.55	- 3.36
7		B.A.C. 2147 .....		6 26 51.86	+ 0.41	29.81	29.78	6 27 22.08	- 1.64
8		B.A.C. 2175 (2d). ...		6 31 51.20	+ 0.38	29.81		6 32 21.39	- 3.24
9		56 Aurigæ (1st)...		6 36 2.12	+ 0.42	29.81	29.85	6 36 32.35	- 2.38
10		59 Aurigæ .....		6 42 47.10	+ 0.43	29.81	29.90	6 43 17.34	- 2.27
11		22 Canis Maj. ...		6 55 35.40	+ 0.42	29.82	29.62	6 56 5.64	- 1.65
12		ψ <sup>2</sup> Cancri .....		8 1 25.58	+ 0.44	29.84	29.92	8 1 55.86	- 2.22
13	Feb. 4	B.A.C. 1510 .....		4 46 20.76	+ 0.06	31.01		4 46 51.83	- 2.91
14		* N.P.D. 105° 0'. ...		4 51 38.34	+ 0.21	31.01	30.87	4 52 9.56	- 1.22
15		(R) Leporis .....		4 52 38.60	+ 0.21	31.01	30.97	4 53 9.82	- 1.22
16		13 Orionis .....		4 59 21.60	+ 0.23	31.02	31.03	4 59 52.85	- 1.26
17		Capella .....		5 5 42.68	+ 0.20	31.02	31.07	5 6 13.90	- 1.68
18		λ Aurigæ .....		5 8 39.60	+ 0.21	31.02	31.11	5 9 10.83	- 1.60
19		ο Columbæ .....		5 11 52.22	+ 0.18	31.02		5 12 23.42	- 1.38
20		γ Orionis .....		5 17 1.04	+ 0.22	31.02		5 17 32.28	- 1.35
21		B.A.C. 1718 .....		5 22 4.04	+ 0.18	31.02		5 22 35.24	- 1.41
22		θ <sup>1</sup> Orionis (3d)...		5 27 48.14	+ 0.21	31.03		5 28 19.38	- 1.36
23		B.A.C. 1809 .....		5 35 45.50	+ 0.17	31.03		5 36 16.70	- 1.46
24		B.A.C. 1859 .....		5 42 9.02	+ 0.17	31.03		5 42 40.22	- 1.48
25		β Columbæ .....		5 45 27.76	+ 0.17	31.03		5 45 58.96	- 1.51
26		139 Tauri .....		5 48 41.46	+ 0.22	31.03		5 49 12.71	- 1.67
27		59 Orionis .....		5 50 32.14	+ 0.23	31.04	31.16	5 51 3.41	- 1.48
28		36 Camelopard ...		5 58 6.12	+ 0.14	31.04		5 58 37.30	- 3.38
29		B.A.C. 2072 .....		6 17 23.36	+ 0.18	31.04		6 17 54.58	- 1.56
30		51 Cephei (Hev.). ...		6 32 38.44	- 1.13	31.05	*30.92	6 33 8.36	- 29.47
31		R.H.C. 1029 .....	5	7 2 10.36	- 0.41	31.06		7 2 41.01	- 16.59
32		B.A.C. 2443 .....		7 16 16.08	+ 0.18	31.07	31.01	7 16 47.33	- 1.70
33		B.A.C. 2453 .....		7 17 38.92	+ 0.18	31.07	30.98	7 18 10.17	- 1.69
34		Rad. 4447. ... S.P.	3	7 33 33.43	+ 1.98	+ 31.07	+ *31.03	19 34 6.48	+ 39.82
7 Ill defined. 11—12 Cloudy. 15 Rich crimson. 19 Faint.					21 Very faint. 24 Scarcely visible. 27 Companion invisible. 29 Very faint.				

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 4	Pollux .....		7 36 8.04	+ 0.22	+ 31.07	+ 31.26	7 36 39.33	- 2.20
2		B.A.C. 2599 .....		7 42 34.42	+ 0.20	31.07	30.95	7 43 5.69	- 1.71
3	Feb. 6	Capella .....		5 5 41.64	+ 0.26	32.22	32.02	5 6 14.12	- 1.65
4		τ Orionis .....		5 10 11.60	+ 0.25	32.22		5 10 44.07	- 1.27
5		ψ <sup>a</sup> Orionis .....		5 18 52.98	+ 0.26	32.23		5 19 25.47	- 1.31
6		ζ Tauri .....		5 28 38.58	+ 0.26	32.23	32.24	5 29 11.07	- 1.47
7		ο Aurigæ .....		5 34 23.82	+ 0.24	32.23	32.27	5 34 56.29	- 2.03
8		136 Tauri .....		5 43 53.46	+ 0.27	32.24		5 44 25.97	- 1.65
9		δ Aurigæ .....		5 47 20.38	+ 0.24	32.24		5 47 52.86	- 2.35
10		ε Geminorum ..		6 34 41.06	+ 0.26	32.26	32.32	6 35 13.58	- 1.89
11		Sirius .....	4	6 38 22.44	+ 0.24	32.26	32.36	6 38 54.94	- 1.57
12	Feb. 8	* N.P.D. 105° 0'.		4 51 36.02	+ 0.28	33.27	33.00	4 52 9.57	- 1.16
13		(R) Leporis .....		4 52 36.24	+ 0.28	33.27	33.20	4 53 9.79	- 1.16
14		13 Orionis .....		4 59 19.48	+ 0.30	33.27	33.04	4 59 53.05	- 1.22
15		B.A.C. 1661 .....		5 14 5.32	+ 0.29	33.27	33.32	5 14 38.88	- 1.27
16		B.A.C. 1696 .....		5 18 33.16	+ 0.30	33.28		5 19 6.74	- 1.29
17		ψ <sup>a</sup> Orionis .....		5 18 51.66	+ 0.30	33.28		5 19 25.24	- 1.29
18		22 Camelopard ..		5 26 34.72	+ 0.30	33.28		5 27 8.30	- 2.16
19		B.A.C. 1808 .....		5 35 52.00	+ 0.31	33.28		5 36 25.59	- 1.45
20		B.A.C. 1881 .....		5 47 5.20	+ 0.27	33.29		5 47 38.76	- 3.21
21		59 Orionis .....		5 50 29.88	+ 0.30	33.29	33.31	5 51 3.47	- 1.44
22		66 Orionis .....		5 56 56.46	+ 0.30	33.29		5 57 30.05	- 1.48
23		72 Orionis .....		6 6 41.78	+ 0.31	33.29	33.51	6 7 15.38	- 1.62
24		45 Aurigæ .....		6 9 42.68	+ 0.31	33.29		6 10 16.28	- 2.52
25		24 Ursæ Min. S.P.		6 22 21.36	+ 1.14	33.30	*33.66	18 22 55.80	+ 23.73
26		51 Cephei (Hev.).		6 32 34.12	- 0.42	33.30	*33.61	6 33 7.00	- 28.60
27		59 Aurigæ .....		6 42 43.56	+ 0.32	33.30	33.51	6 43 17.18	- 2.23
28		38 Geminorum ...		6 46 6.10	+ 0.31	33.30	33.41	6 46 39.71	- 1.77
29		B.A.C. 2317 .....		6 57 51.70	+ 0.11	33.31		6 58 25.12	- 10.67
30		18 Lyncis .....		7 2 59.66	+ 0.29	33.31		7 3 33.26	- 3.51
31		ε Geminorum ...		7 16 22.50	+ 0.31	33.31		7 16 56.12	- 2.14
32		22 Lyncis .....		7 18 37.48	+ 0.30	33.31	+ 33.34	7 19 11.09	- 2.91
33		23 Lyncis .....		7 28 33.40	+ 0.30	+ 33.32		7 29 7.02	- 3.51
February 6. Partially cloudy throughout the evening.									
3—4 Cloudy. 9 Scarcely visible.					13 Rich crimson, and certainly brighter. 28 Companion (90) sf.				

LAMP EAST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 8	* N.P.D. 66° 23'.		7 33 59.84	+ 0.31	+ 33.32		7 34 33.47	- 2.11
2		B.A.C. 2599 .....		7 42 32.10	+ 0.26	33.32	+ 33.20	7 43 5.68	- 1.70
3		* N.P.D. 118° 5'.		7 53 11.12	+ 0.25	33.32		7 53 44.69	- 1.71
4	Feb. 9	66 Orionis .....		5 56 55.72	+ 0.38	33.70	33.58	5 57 29.80	- 1.47
5		77 Geminorum ...		6 5 46.02	+ 0.39	33.70	33.66	6 6 20.11	- 1.68
6		5 Monocerotis ...		6 7 23.28	+ 0.35	33.70	33.69	6 7 57.33	- 1.47
7		7 Geminorum ...		6 19 59.46	+ 0.39	33.71	33.86	6 20 33.56	- 1.72
8		51 Cephei (Hev.).		6 32 32.88	+ 0.29	33.71	* 33.88	6 33 6.88	- 28.40
9		Sirius .....		6 38 20.84	+ 0.34	33.71	33.84	6 38 54.89	- 1.55
10		R.H.C. 2882. S.P.		6 59 43.02	+ 0.62	33.72	* 33.88	19 0 17.36	+ 24.02
11		71 Geminorum ...		7 29 21.60	+ 0.41	33.73		7 29 55.74	- 2.35
12		σ Geminorum ...		7 33 54.06	+ 0.40	33.73		7 34 28.19	- 2.22
13		φ Geminorum ...		7 44 16.12	+ 0.41	33.73	33.79	7 44 50.26	- 2.22
14		B.A.C. 2673 .....		7 54 20.40	+ 0.38	33.73	33.64	7 54 54.51	- 1.85
15		ψ <sup>1</sup> Cancri .....		8 1 21.76	+ 0.40	33.74	33.80	8 1 55.90	- 2.24
16		ζ <sup>1</sup> Cancri .....		8 3 31.98	+ 0.39	33.74	33.61	8 4 6.11	- 2.08
17		* N.P.D. 73° 2'...		8 4 23.24	+ 0.39	33.74	33.73	8 4 57.37	- 2.07
18		68 Draconis S.P.		8 8 37.42	+ 0.51	33.74		20 9 11.67	+ 3.03
19	Feb. 16	ψ <sup>1</sup> Cancri .....		8 1 18.74	+ 0.33	36.85	36.88	8 1 55.92	- 2.23
20		ζ <sup>1</sup> Cancri .....		8 3 28.80	+ 0.33	36.85	36.83	8 4 5.98	- 2.06
21		γ Cancri .....		8 34 28.92	+ 0.33	36.86		8 35 6.11	- 2.25
22		Σ 1280 (1st) .....		8 41 26.82	+ 0.21	36.86		8 42 3.89	- 6.36
23		B.A.C. 3025 .....		8 46 38.14	+ 0.32	36.86	36.85	8 47 15.32	- 3.12
24		ι Ursæ Majoris ...		8 48 54.20	+ 0.31	36.86	36.80	8 49 31.37	- 3.23
25		ν Cancri .....		8 53 51.02	+ 0.34	36.87		8 54 28.23	- 2.35
26		B.A.C. 3104 .....		8 57 53.60	+ 0.33	36.87	36.77	8 58 30.80	- 2.14
27		ξ Cancri .....		9 0 36.28	+ 0.33	36.87	37.03	9 1 13.48	- 2.30
28	Feb. 18	Lalande 10912 ...		5 38 38.28	+ 0.31	37.75	37.58	5 39 16.34	- 1.42
29		B.A.C. 1865 .....		5 43 53.34	+ 0.28	37.75		5 44 31.37	- 1.24
30		δ Aurigæ .....		5 47 14.40	+ 0.27	37.75		5 47 52.42	- 2.10
31		η Leporis .....		5 49 19.62	+ 0.30	37.75	+ 37.68	5 49 57.67	- 1.27
32		140 Tauri .....		5 51 15.22	+ 0.31	+ 37.75		5 51 53.28	- 1.50
February 9. Generally cloudy throughout the evening.									
3 Very faint. 22 Companion (7.7) nf.					29 Faint.				

## LAMP EAST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 18	74 Orionis .....		6 7 51.76	+0.31	+37.75		6 8 29.82	-1.48
2		24 Urse Min. S.P.		6 22 19.94	+1.93	37.76	+37.13	18 22 59.63	+20.86
3		51 Cephei (Hev.).		6 32 28.66	-1.24	37.76	*37.09	6 33 5.18	-25.76
4		62 Aurigæ .....		6 48 46.14	+0.29	37.76	37.87	6 49 24.19	-2.15
5		R.H.C. 2859. S.P.	3	6 53 52.18	+1.25	37.76		18 54 31.19	+13.34
6		18 Lyncis .....		7 2 55.24	+0.24	37.76		7 3 33.24	-3.34
7		B.A.C. 2377 .....	5	7 8 8.52	-0.12	37.77		7 8 46.17	-10.00
8		ε Geminorum ...		7 16 18.06	+0.31	37.77	37.95	7 16 56.14	-2.07
9		B.A.C. 2489 .....		7 25 31.28	+0.31	37.77	37.61	7 26 9.36	-2.19
10		71 Geminorum ...		7 29 17.70	+0.31	37.77		7 29 55.78	-2.30
11		Procyon .....		7 31 15.64	+0.31	37.77	37.91	7 31 53.72	-1.77
12		σ Geminorum ...		7 33 50.02	+0.31	37.77		7 34 28.10	-2.18
13		ξ Argus .....		7 42 43.14	+0.29	37.77		7 43 21.20	-1.63
14		* N.P.D. 73° 2' ...		8 4 19.34	+0.31	37.78	37.70	8 4 57.43	-2.06
15		ρ <sup>1</sup> Cancri .....		8 43 20.24	+0.31	37.79	37.86	8 43 58.34	-2.42
16		ρ <sup>2</sup> Cancri .....		8 43 32.36	+0.31	37.79	37.75	8 44 10.46	-2.42
17		(T) Hydræ .....		8 48 9.06	+0.31	37.79		8 48 47.16	-1.84
18		B.A.C. 3076 .....		8 53 25.30	+0.31	37.79		8 54 3.40	-2.00
19		B.A.C. 3104 .....		8 57 52.64	+0.32	37.79	37.75	8 58 30.75	-2.15
20	Feb. 19	ζ Tauri .....		5 28 32.54	+0.42	38.00	37.96	5 29 10.96	-1.31
21		ο Aurigæ .....		5 34 17.58	+0.34	38.00	38.16	5 34 55.92	-1.78
22		κ Orionis .....		5 40 24.30	+0.44	38.00	37.94	5 41 2.74	-1.23
23		B.A.C. 2175. (2d)		6 32 43.08	+0.29	38.01		6 33 21.38	-2.92
24		Sirius .....		6 38 16.52	+0.45	38.01	37.94	6 38 54.98	-1.44
25		18 Lyncis .....		7 2 54.84	+0.28	38.02		7 3 33.14	-3.33
26	Feb. 20	39 Geminorum ...		6 49 25.16	+0.50	38.36	38.47	6 50 4.02	-1.86
27		B.A.C. 2303 .....		6 54 47.26	+0.59	38.37		6 55 26.22	-1.46
28		B.A.C. 2331 .....		6 59 39.48	+0.49	38.37	38.37	7 0 18.34	-2.00
29		18 Lyncis .....		7 2 54.18	+0.31	38.37		7 3 32.86	-3.31
30		B.A.C. 2383 .....		7 7 38.48	+0.51	38.37	38.48	7 8 17.36	-1.97
31		λ Geminorum ...		7 9 18.78	+0.53	38.37	38.38	7 9 57.68	-1.82
32		22 Lyncis .....		7 18 32.44	+0.40	38.37	38.17	7 19 11.21	-2.80
33		Castor .....		7 24 54.90	+0.48	+38.37	+38.44	7 25 33.75	-2.19

February 19. Generally cloudy throughout the night.

1 Unsteady.  
13 Ruddy.

27 Cloudy. The R.A. of this star in the B.A.C. is nearly 6<sup>s</sup> less than shewn by several observations in different years. Vide vol. xvii. p. 46\* of the Rad. Obs.

32—33 Cloudy.

LAMP EAST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 20	Procyon.....		7 31 15.00	+ 0.55	+ 38.38	+ 38.30	7 31 53.93	- 1.76
2		Groom. 1359.....		7 42 2.36	- 1.27	38.38	*38.64	7 42 39.47	- 17.10
3		$\lambda$ Ursæ Min. S.P.	2	8 3 29.75	+ 10.25	38.38	*38.66	20 4 18.38	+ 86.48
4	Feb. 22	$\chi$ Aurigæ.....		5 22 50.86	+ 0.41	39.34		5 23 30.61	- 1.32
5		Lalande 10912...		5 38 36.42	+ 0.41	39.35	39.28	5 39 16.18	- 1.36
6		136 Tauri.....		5 43 45.94	+ 0.41	39.35		5 44 25.70	- 1.43
7		$\delta$ 1 L.....		5 46 49.00	+ 0.42	39.35		5 48 46.11	
8		140 Tauri.....		5 51 13.46	+ 0.40	39.35		5 51 53.21	- 1.43
9		$\kappa$ Aurigæ.....		6 5 41.62	+ 0.40	39.36	39.40	6 6 21.38	- 1.61
10		75 Orionis.....		6 8 38.50	+ 0.42	39.36	39.42	6 9 18.28	- 1.41
11		48 Aurigæ.....		6 18 48.36	+ 0.40	39.36		6 19 28.12	- 1.72
12		B.A.C. 2147.....		6 26 42.20	+ 0.38	39.36	39.16	6 27 21.94	- 1.33
13		B.A.C. 2183.....		6 31 50.64	+ 0.38	39.37		6 32 30.39	- 1.36
14		$\epsilon$ Geminorum...		6 34 33.64	+ 0.41	39.37	39.44	6 35 13.42	- 1.74
15		$\xi$ Geminorum...		6 36 40.86	+ 0.41	39.37	39.44	6 37 20.64	- 1.59
16		B.A.C. 2217.....		6 39 13.50	+ 0.40	39.37		6 39 53.27	- 1.40
17		39 Geminorum...		6 49 24.28	+ 0.41	39.37	39.43	6 50 4.06	- 1.85
18		B.A.C. 2317.....		6 57 44.80	- 0.05	39.37		6 58 24.12	- 9.59
19		B.A.C. 2347.....		7 2 32.26	+ 0.42	39.38		7 3 12.06	- 1.75
20		52 Geminorum...		7 5 22.94	+ 0.42	39.38		7 6 2.74	- 1.91
21		B.A.C. 2420.....		7 12 25.64	+ 0.38	39.38		7 13 5.40	- 1.50
22		B.A.C. 2453.....		7 17 30.46	+ 0.38	39.38		7 18 10.22	- 1.50
23		B.A.C. 2466.....		7 19 37.96	+ 0.38	39.38		7 20 17.72	- 1.51
24		Castor.....		7 24 53.98	+ 0.40	39.38	39.42	7 25 33.76	- 2.17
25		23 Lyncis.....		7 28 27.24	+ 0.35	39.38		7 29 6.97	- 3.34
26		* N.P.D. 66° 23'.		7 33 53.84	+ 0.41	39.39		7 34 33.64	- 2.04
27		Groom. 1359.....		7 42 0.94	- 0.34	39.39	*38.90	7 42 39.99	- 16.91
28		B.A.C. 2673.....		7 54 14.56	+ 0.42	39.39	39.38	7 54 54.37	- 1.79
29		$\psi^2$ Cancri.....		8 1 16.16	+ 0.41	39.40	39.34	8 1 55.97	- 2.19
30		$\lambda$ Ursæ Min. S.P.		8 3 36.14	+ 4.75	39.40	+ *38.77	20 4 20.29	+ 85.68
31		Groom. 1437.....		8 17 4.82	+ 0.39	39.40		8 17 44.61	- 2.98
32		B.A.C. 2898.....		8 28 49.78	+ 0.40	39.41		8 29 29.59	- 1.69
33		$\Sigma$ 1263 (1st).....		8 35 10.48	+ 0.39	39.41		8 35 50.28	- 2.86
34		$\Sigma$ 1280 (2d).....		8 41 25.02	- 0.25	+ 39.41		8 42 4.18	- 6.30
1—2 Cloudy.					12—13 Very ill defined.				
3 Cloudy; scarcely visible.					21 Very faint.				
7 Semi-diameter applied, + 77.34.					22—23 Faint.				

## LAMP EAST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 22	(T) Hydræ .....		8 48 7.48	+ 0.41	+ 39.41		8 48 47.30	- 1.83
2		B.A.C. 3076 .....		8 53 23.66	+ 0.41	39.41		8 54 3.48	- 2.00
3	Feb. 24	κ Aurigæ .....		6 5 40.90	+ 0.32	40.27	+ 40.17	6 6 21.49	- 1.58
4		B.A.C. 2162 .....		6 28 40.44	+ 0.26	40.28		6 29 20.98	- 1.30
5		13 Lynceis .....		6 34 4.98	+ 0.29	40.28		6 34 45.55	- 2.67
6		58 Aurigæ .....		6 40 4.86	+ 0.32	40.28	40.18	6 40 45.46	- 2.11
7		R.H.C. 2859. S.P. ....		6 53 49.50	+ 1.02	40.29		18 54 30.81	+ 12.39
8		B.A.C. 2347 .....		7 2 31.46	+ 0.32	40.29		7 3 12.07	- 1.73
9		B.A.C. 2359 .....		7 4 3.54	+ 0.33	40.29		7 4 44.16	- 1.74
10		B.A.C. 2383 .....		7 7 36.70	+ 0.33	40.29	40.40	7 8 17.32	- 1.93
11		λ Geminorum ...		7 9 16.94	+ 0.33	40.29	40.39	7 9 57.56	- 1.79
12		B.A.C. 2420 .....		7 12 24.78	+ 0.28	40.30		7 13 5.36	- 1.46
13		ε Geminorum ...		7 16 15.64	+ 0.33	40.30	40.29	7 16 56.27	- 2.01
14		B.A.C. 2466 .....		7 19 37.02	+ 0.27	40.30	40.18	7 20 17.59	- 1.48
15		ν Geminorum ...		7 26 31.60	+ 0.34	40.30	40.28	7 27 12.24	- 2.05
16		σ Geminorum ...		7 33 47.42	+ 0.32	40.30		7 34 28.04	- 2.13
17		Groom. 1359 .....		7 41 59.72	- 0.19	40.31	*39.73	7 42 39.84	- 16.74
18		δ 1 L. ....		7 58 45.22	+ 0.32	40.31		8 0 40.04	
19		λ Ursæ Min. S.P. ....		8 3 37.48	+ 3.41	40.31	*39.87	20 4 21.20	+ 84.56
20		B.A.C. 2827 .....		8 18 17.14	+ 0.29	40.32	40.35	8 18 57.75	- 1.66
21		B.A.C. 2828 .....		8 18 20.14	+ 0.29	40.32	40.37	8 19 0.75	- 1.66
22		η Cancri .....		8 23 51.04	+ 0.33	40.32	40.38	8 24 31.69	- 2.16
23		γ Cancri .....		8 34 25.52	+ 0.32	40.32		8 35 6.16	- 2.22
24		Σ 1280 (1st) .....		8 41 23.02	+ 0.22	40.33		8 42 3.57	- 6.27
25		Σ 1280 (2d) .....		8 41 23.88	+ 0.22	40.33		8 42 4.43	- 6.27
26		(T) Hydræ .....		8 48 6.60	+ 0.32	40.33		8 48 47.25	- 1.82
27	Feb. 25	B.A.C. 2183 .....		6 31 48.80	+ 0.24	41.09		6 32 30.13	- 1.29
28		B.A.C. 2217 .....		6 39 12.00	+ 0.28	41.10		6 39 53.38	- 1.35
29		R.H.C. 2859. S.P. ....	5	6 53 49.30	+ 0.58	41.10		18 54 30.98	+ 12.21
30		B.A.C. 2383 .....		7 7 35.90	+ 0.35	41.10	41.18	7 8 17.35	- 1.93
31		B.A.C. 2420 .....		7 12 24.22	+ 0.24	41.10		7 13 5.56	- 1.44
32		Groom. 1359 .....	5	7 41 58.04	+ 0.24	41.11	*40.86	7 42 39.39	- 16.64
33		λ Ursæ Min. S.P. ....	5	8 3 39.20	+ 1.22	+ 41.12	+ *40.90	20 4 21.54	+ 84.28

February 25. From this time the observations were taken by the ordinary method (eye and ear) over the seven wires, in consequence of the failure of the Chronograph.

12 Very faint.  
18 Semi-diameter applied, + 74".19.

31 Faint.

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Feb. 25	(R) Cancri.....		8 8 45.0	+ 0.33	+41.12	+ 41.07	8 8 45.95	- 1.95
2		$\nu^1$ Cancri (1st) ...		8 17 33.59	+ 0.35	41.12		8 18 15.06	- 2.22
3		$\eta$ Cancri .....		8 23 50.18	+ 0.33	41.12	41.24	8 24 31.63	- 2.16
4		B.A.C. 2898 .....		8 28 47.98	+ 0.25	41.12		8 29 29.35	- 1.67
5		$\gamma$ Cancri .....		8 34 24.66	+ 0.34	41.12		8 35 6.12	- 2.22
6		$\Sigma$ 1280 (1st).....	5	8 41 22.18	+ 0.35	41.12		8 42 3.65	- 6.25
7		(T) Hydræ .....		8 48 5.79	+ 0.33	41.12		8 48 47.24	- 1.82
8		B.A.C. 3076 .....		8 53 21.96	+ 0.32	41.12		8 54 3.40	- 2.00
9		$\delta$ 1 L. ....		8 59 9.55	+ 0.33	41.13		9 1 2.21	
10		$\pi^1$ Cancri .....		9 3 51.96	+ 0.33	41.13	40.97	9 4 33.42	- 2.17
11		$\pi^2$ Cancri .....		9 6 43.93	+ 0.33	41.13		9 7 25.39	- 2.17
12		$\delta$ 3 Cancri .....		9 10 23.98	+ 0.33	41.13	41.02	9 11 5.44	- 2.23
13		$\iota$ 2 Leonis .....		9 30 23.55	+ 0.34	41.13	41.21	9 31 5.02	- 2.45
14		$\iota$ 5 Leonis .....		9 34 34.48	+ 0.34	41.13		9 35 15.95	- 2.59
15	Feb. 26	$\gamma$ 8 Orionis.....		6 19 19.76	+ 0.32	41.21	41.42	6 20 1.29	- 1.35
16		B.A.C. 2147 .....		6 26 40.28	+ 0.25	41.21	41.12	6 27 21.74	- 1.24
17		B.A.C. 2217 .....		6 39 11.65	+ 0.28	41.21	41.09	6 39 53.14	- 1.32
18		R.H.C. 2859. S.P.	5	6 53 50.10	+ 0.64	41.22		18 54 31.96	+12.00
19	Feb. 27	B.A.C. 2162 .....		6 28 39.02	+ 0.26	41.71		6 29 20.99	- 1.24
20		$\iota$ 3 Lyncis .....		6 34 3.16	+ 0.35	41.71		6 34 45.22	- 2.60
21		B.A.C. 2217 .....		6 39 11.09	+ 0.29	41.71	41.63	6 39 53.09	- 1.31
22		B.A.C. 2317 .....	5	6 57 42.06	+ 0.23	41.72		6 58 24.01	- 9.10
23		B.A.C. 2359 .....		7 4 2.06	+ 0.35	41.72		7 4 44.13	- 1.71
24		47 Camelopard ...		7 9 10.92	+ 0.36	41.72		7 9 53.00	- 3.24
25		Castor .....		7 24 51.68	+ 0.35	41.73	41.71	7 25 33.76	- 2.11
26		$\gamma$ 0 Geminorum ...		7 28 33.52	+ 0.36	41.73	41.74	7 29 15.61	- 2.22
27		$\sigma$ Geminorum ...		7 33 46.13	+ 0.35	41.73		7 34 28.21	- 2.10
28		Pollux .....		7 35 57.13	+ 0.35	41.73	41.93	7 36 39.21	- 3.09
29		$\delta$ 1 L. ....		10 46 45.34	} + 0.33	41.79		10 48 33.28	
30		$\delta$ 2 L. ....		10 48 56.98					
31		$\beta$ Crateris .....	4	11 4 0.58	+ 0.29	41.80	41.78	11 4 42.67	- 1.83
32		$\tau$ Leonis .....		11 19 58.06	+ 0.33	+41.80	+ 41.71	11 20 40.19	- 2.02
9 Semi-diameter applied, + 71".20. 16 Faint and ill defined. 29 — 0".02 has been applied to the transit of 1 L. for defective illumination.					29—31 Cloudy. 32 Cloudy; scarcely visible.				

## LAMP EAST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Mar. 5	R.H.C. 2859. S.P.	4	6 53 50.22	+ 1.23	+42.65		18 54 34.10	+10.70
2		R.H.C. 1029 .....	5	7 1 54.40	- 0.33	42.66		7 2 36.73	-12.87
3		70 Geminorum ...	7	28 32.40	+ 0.35	42.66	+ 42.80	7 29 15.41	- 2.15
4		Groom. 1359 .....	5	7 41 55.40	- 0.32	42.66	*42.94	7 42 37.74	-15.39
5		* N.P.D. 118° 5'.	7	53 1.73	+ 0.33	42.66		7 53 44.72	- 1.47
6		ζ <sup>1</sup> Cancrī .....	8	3 23.08	+ 0.35	42.66	42.73	8 4 6.09	- 1.97
7		(R) Cancrī .....	8	8 2.86	+ 0.36	42.66	42.61	8 8 45.88	- 1.88
8		Groom. 3212. S.P.	5	8 18 37.70	+ 1.20	42.66	*42.92	20 19 21.56	+15.31
9		η Cancrī .....	8	23 48.68	+ 0.36	42.66	42.65	8 24 31.70	- 2.10
10		Σ 1263 (1st) .....	8	35 7.08	+ 0.33	42.66		8 35 50.07	- 2.80
11		Σ 1280 (2d) .....	5	8 41 21.16	+ 0.21	42.66		8 42 4.03	- 6.07
12		(T) Hydræ .....	8	48 3.90	+ 0.35	42.66		8 48 46.91	- 1.77
13		ν Cancrī .....	8	53 45.08	+ 0.36	42.66		8 54 28.10	- 2.31
14		B.A.C. 3104 .....	8	57 47.70	+ 0.36	42.66	42.63	8 58 30.72	- 2.13
15		Σ 1321 (1st) .....	9	4 1.29	+ 0.31	42.66		9 4 44.26	- 3.58
16		83 Cancrī .....	9	10 22.45	+ 0.35	42.66	42.51	9 11 5.46	- 2.21
17		B.A.C. 3226 .....	9	20 3.63	+ 0.35	42.66		9 20 46.64	- 1.87
18		B.A.C. 3245 .....	5	9 23 18.14	+ 0.19	42.66		9 24 0.99	- 6.96
19		υ Ursæ Majoris ...	9	40 12.83	+ 0.30	42.67		9 40 55.80	- 4.38
20		R.H.C. 3347. S.P.	5	9 51 10.40	+ 1.64	42.67		21 51 54.71	+29.46
21	Mar. 6	Sirius .....	6	38 11.76	+ 0.31	42.73	42.61	6 38 54.80	- 1.21
22		22 Canis Majoris .	6	55 22.10	+ 0.28	42.74		6 56 5.12	- 1.23
23		B.A.C. 2347 .....	7	2 28.73	+ 0.37	42.74		7 3 11.84	- 1.61
24		B.A.C. 2377 .....	5	7 8 2.02	+ 0.50	42.74		7 8 45.26	- 8.52
25		B.A.C. 2443 .....	7	16 4.06	+ 0.25	42.74		7 16 47.05	- 1.29
26		B.A.C. 2489 .....	7	25 25.92	+ 0.39	42.74	42.72	7 26 9.05	- 2.02
27		B.A.C. 2517 .....	7	30 7.86	+ 0.39	42.74		7 30 50.99	- 2.06
28		ξ Argūs .....	7	42 37.85	+ 0.28	42.74		7 43 20.87	- 1.44
29		* N.P.D. 118° 5'.	7	53 1.58	+ 0.27	42.74		7 53 44.59	- 1.47
30		ζ <sup>1</sup> Cancrī .....	8	3 23.06	+ 0.37	42.74	42.73	8 4 6.17	- 1.97
31		(R) Cancrī .....	8	8 2.83	+ 0.36	42.74	42.63	8 8 45.93	- 1.87
32		Groom. 3212. S.P.	5	8 18 38.94	+ 0.36	42.74	*42.66	20 19 22.04	+15.16
33		Radcliffe 2162 ...	5	8 25 22.70	+ 0.53	42.74	+*42.64	8 26 5.97	-17.49
34		Σ 1263 (1st) .....	8	35 6.98	+ 0.40	+42.74		8 35 50.12	- 2.77
x Cloudy.				10 Companion (90) nf.					
7 Dull and ruddy.				15 Companion (73) nf. 2°.					



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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Mar. 6	$\rho^1$ Cancri .....		8 43 15.09	+ 0.40	+ 42.74	+ 42.86	8 43 58.23	- 2.36
2		17 Hydræ (South) .....		8 47 50.70	+ 0.33	42.74		8 48 33.77	- 1.78
3		$\tau$ Ursæ Majoris .....		8 58 31.68	+ 0.43	42.74		8 59 14.85	- 4.70
4		$\Sigma$ 1321 (2d) .....		9 4 2.89	+ 0.42	42.74		9 4 46.05	- 3.58
5		$\gamma$ Leonis Min. ....		9 21 27.16	+ 0.40	42.74		9 22 10.30	- 2.66
6		12 Leonis .....		9 30 21.83	+ 0.38	42.75	42.87	9 31 4.96	- 2.43
7		$\delta$ Leonis .....		9 34 32.80	+ 0.39	42.75		9 35 15.94	- 2.58
8		$\nu$ Ursæ Majoris .....		9 40 12.73	+ 0.43	42.75		9 40 55.91	- 4.37
9		$\gamma$ Sextantis .....		9 44 11.75	+ 0.35	42.75		9 44 54.85	- 2.03
10		R.H.C. 3347 S.P. 5	5	9 51 11.70	+ 0.31	42.75		21 51 54.76	+ 29.35
11		Groom. 1618 .....		10 1 59.90	+ 0.41	42.75		10 2 43.06	- 3.56
12		35 Leonis .....		10 7 59.63	+ 0.38	42.75		10 8 42.76	- 2.47
13	Mar. 8	B.A.C. 2347 .....		7 2 28.52	+ 0.36	42.96		7 3 11.84	- 1.58
14		B.A.C. 2377 .....	5	7 8 2.00	+ 0.26	42.96		7 8 45.22	- 8.29
15		B.A.C. 2420 .....	6	7 12 22.16	+ 0.28	42.96		7 13 5.40	- 1.24
16		$\nu$ Geminorum .....		7 26 28.62	+ 0.38	42.97	43.07	7 27 11.97	- 1.90
17		B.A.C. 2517 .....		7 30 7.45	+ 0.37	42.97		7 30 50.79	- 2.04
18		Pollux .....		7 35 56.02	+ 0.37	42.97	42.91	7 36 39.36	- 1.98
19		$\xi$ Argus .....		7 42 37.53	+ 0.30	42.97		7 43 20.80	- 1.41
20		B.A.C. 2673 .....		7 54 11.06	+ 0.35	42.97	42.84	7 54 54.38	- 1.68
21		B.A.C. 2734 .....		8 2 2.92	+ 0.36	42.97		8 2 46.25	- 2.25
22		(R) Cancri .....		8 8 2.43	+ 0.36	42.97	43.02	8 8 45.76	- 1.86
23		Groom. 1437 .....		8 17 0.99	+ 0.38	42.97		8 17 44.34	- 2.82
24		Radcliffe 2162 ... 5	5	8 25 22.10	+ 0.16	42.97	*43.35	8 26 5.23	- 17.26
25		Rad. 4980 ... S.P. 5	5	8 38 54.70	+ 1.05	42.97	*43.43	20 39 38.72	+ 37.43
26		60 Cancri .....		8 47 28.73	+ 0.36	42.97		8 48 12.06	- 2.01
27		B.A.C. 3104 .....		8 57 47.38	+ 0.36	42.97	42.93	8 58 30.71	- 2.11
28		$\Sigma$ 1321 (1st) .....		9 4 0.83	+ 0.36	42.97		9 4 44.16	- 3.55
29		R.H.C. 3232. S.P. 5	5	9 11 8.20	+ 0.77	42.97		21 11 51.94	+ 21.16
30		23 Ursæ Majoris . 5	5	9 19 38.84	+ 0.36	42.98		9 20 22.18	- 4.77
31		B.A.C. 3245 .....	5	9 23 17.90	+ 0.34	42.98		9 24 1.22	- 6.90
32		$\gamma$ Sextantis .....		9 44 11.25	+ 0.35	42.98		9 44 54.58	- 2.03
33		$\pi$ Leonis .....		9 52 1.22	+ 0.35	42.98	+ 43.06	9 52 44.55	- 2.12
34		Groom. 1618 .....		10 1 59.63	+ 0.37	+ 42.98		10 2 42.98	- 3.56
2 The minutes were noted 48.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Mar. 9	20 Monocerotis ...		7 2 28.39	+ 0.36	+ 43.09		7 3 11.84	- 1.37
2		B.A.C. 2399 .....		7 9 9.35	+ 0.30	43.09		7 9 52.74	- 1.22
3		$\alpha^1$ Geminorum ...		7 24 50.10	+ 0.39	43.09	+ 43.12	7 25 33.58	- 1.98
4		70 Geminorum ...		7 28 31.88	+ 0.40	43.09	43.20	7 29 15.37	- 2.08
5		Pollux .....		7 35 55.98	+ 0.39	43.09	42.91	7 36 39.46	- 1.96
6		Groom. 1359 .....	5	7 41 54.30	+ 0.29	43.10	*42.81	7 42 37.69	- 14.84
7		R.H.C. 3015 S.P. ...	5	7 52 3.70	- 0.17	43.10		19 52 46.63	+ 23.28
8		B.A.C. 2734 .....		8 2 2.73	+ 0.40	43.10		8 2 46.23	- 2.23
9		(R) Cancri .....		8 8 2.32	+ 0.38	43.10	43.09	8 8 45.80	- 1.84
10		Groom. 1437 .....		8 17 0.86	+ 0.40	43.10		8 17 44.36	- 2.81
11		Rad. 4881 ... S.P. ...	5	8 27 47.20	+ 0.64	43.10	*42.95	20 28 30.94	+ 16.40
12		Rad. 4894 ... S.P. ...	5	8 29 32.20	+ 0.65	43.10	*42.82	20 30 15.95	+ 16.58
13		$\Sigma$ 1321 (2d) .....		9 4 2.60	+ 0.39	43.11		9 4 46.10	- 3.54
14		$\lambda$ Urse Majoris ...	5	9 19 38.70	+ 0.39	43.11		9 20 22.20	- 4.75
15		B.A.C. 3245 .....	5	9 23 17.68	+ 0.38	43.11		9 24 1.17	- 6.88
16		(R) Leonis .....		9 39 13.85	+ 0.38	43.11	43.04	9 39 57.34	- 2.15
17		7 Sextantis .....		9 44 11.08	+ 0.36	43.11		9 44 54.55	- 2.02
18		$\pi$ Leonis .....		9 52 1.02	+ 0.37	43.11	43.24	9 52 44.50	- 2.12
19		Groom. 1618 .....	10	1 59.28	+ 0.40	43.11		10 2 42.79	- 3.56
20	Mar. 11	$\alpha^1$ Geminorum ...		7 24 50.09	+ 0.41	43.64	43.53	7 25 34.14	- 1.95
21		Procyon .....		7 31 9.62	+ 0.42	43.64	43.61	7 31 53.68	- 1.56
22		Pollux .....		7 35 55.12	+ 0.41	43.64	43.72	7 36 39.17	- 1.93
23		Groom. 1359 .....	5	7 41 53.90	- 0.39	43.65	*43.56	7 42 37.16	- 14.56
24		18 Puppis .....		8 3 22.40	+ 0.41	43.65		8 4 6.46	- 1.67
25		Groom. 3212 S.P. ...	5	8 18 37.70	+ 1.41	43.66	*43.59	20 19 22.77	+ 14.49
26		$\Sigma$ 1321 (1st) .....		9 3 59.92	+ 0.36	43.67		9 4 43.95	- 3.51
27		$\pi^1$ Cancri .....		9 6 41.22	+ 0.42	43.67		9 7 25.31	- 2.11
28		$\lambda$ Urse Majoris ...	5	9 19 37.86	+ 0.31	43.68		9 20 21.85	- 4.72
29		8 Leonis Min. ...		9 22 11.68	+ 0.41	43.68		9 22 55.77	- 2.69
30		$\pi$ Leonis .....		9 52 0.49	+ 0.42	43.69	43.72	9 52 44.60	- 2.12
31		Regulus .....	10	0 6.40	+ 0.42	43.69	43.70	10 0 50.51	- 2.20
32		35 Leonis .....	10	7 58.53	+ 0.41	+ 43.69		10 8 42.63	- 2.47
33	Mar. 13	$\epsilon$ Hydræ .....	6	8 38 32.07	+ 0.34	.....	+ 44.77	.....	

March 11. A cloudy night throughout.

23 Faint.

LAMP EAST.								
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.
	1858.			h. m. s.	s.	s.	s.	h. m. s.
1	Mar. 14	Regulus .....		10 0 50.8	+0.28	+45.28	+45.15	10 0 50.64
2		Groom. 1620 .....	5	10 7 58.50	-0.44	45.29	*44.85	10 8 43.35
3		30 Leonis Min. ...		10 17 3.00	+0.27	45.29	45.42	10 17 48.56
4		Groom. 3820 S.P. ...	5	10 22 51.30	+1.25	45.29	*44.90	22 23 37.84
5		1 Leonis .....		10 41 4.19	+0.28	45.30	45.29	10 41 49.77
6	Mar. 17	$\nu^1$ Cancri (1st) ...		8 17 26.90	+0.12	47.84		8 18 14.86
7		Rad. 4881 ... S.P. ...	5	8 27 42.70	+1.77	47.84	*47.65	20 28 32.31
8		Radcliffe 2198 ...	5	8 37 16.80	-1.46	47.85	*47.60	8 38 3.19
9		$\rho^2$ Cancri .....		8 43 22.15	+0.12	47.85	47.98	8 44 10.12
10		17 Hydræ (South) ...		8 47 45.69	+0.15	47.86		8 48 33.70
11		41 Lyncis .....		9 18 35.56	+0.05	47.87	47.97	9 19 23.48
12		8 Leonis Min. ...		9 22 8.00	+0.09	47.88		9 22 55.97
13		$\pi$ Leonis .....		9 51 56.59	+0.14	47.89	47.88	9 52 44.62
14		Regulus .....		10 0 2.53	+0.14	47.90	47.83	10 0 50.57
15		23 Leonis Min. ...		10 7 24.56	+0.10	47.90	47.94	10 8 12.56
16		B.A.C. 3528 .....	5	10 12 52.90	-0.97	47.91		10 13 39.84
17		36 Ursæ Majoris ...	5	10 20 46.92	0.00	47.91		10 21 34.83
18		B.A.C. 3627 .....		10 27 26.36	+0.16	47.92	47.73	10 28 14.44
19		(R) Ursæ Majoris ...	5	10 33 50.82	-0.15	47.92		10 34 38.59
20	Mar. 22	B.Z. 279,165 .....		7 45 54.48	+0.28	52.21		7 46 46.97
21		18 Puppis .....		8 3 13.66	+0.34	52.22		8 4 6.22
22		$\nu^1$ Cancri (1st) ...		8 17 22.25	+0.28	52.23		8 18 14.76
23		Rad. 4881 ... S.P. ...	3	8 27 38.99	+2.49	52.24	*51.55	20 28 33.72
24		Rad. 4894 ... S.P. ...	5	8 29 22.90	+2.50	52.24	*51.66	20 30 17.64
25		R.H.C. 1285 .....	5	8 44 12.00	-1.82	52.25		8 45 2.43
26		$\Sigma$ 1321 (2d) .....		9 3 53.39	+0.13	52.26		9 4 45.78
27		Radcliffe 2320 ...	5	9 15 14.20	-1.57	52.27	*51.59	9 16 4.90
28		1 Hydræ .....		9 31 45.39	+0.33	52.28	52.36	9 32 38.00
29		14 Leonis Min. ...		9 36 47.12	+0.19	52.28	52.10	9 37 39.59
30		$\mu$ Leonis .....		9 43 50.60	+0.26	52.29	52.42	9 44 43.15
31		Regulus .....		9 59 57.95	+0.30	52.30	52.23	10 0 50.55
32		23 Leonis Min. ...		10 7 20.00	+0.25	52.30	+52.32	10 8 12.55
33		B.A.C. 3528 .....	5	10 12 47.80	-1.22	+52.31		10 13 38.89

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Mar. 22	B.A.C. 3567 .....		10 18 27.88	+ 0.16	+ 52.31		10 19 20.35	- 3.49
2		B.A.C. 3629 .....	5	10 28 36.02	- 0.82	52.32		10 29 27.52	- 13.00
3		(R) Urse Majoris	5	10 33 46.30	- 0.11	52.32		10 34 38.51	- 6.14
4		Lalande 21185 ...		10 54 44.43	+ 0.22	52.33		10 55 36.98	- 2.93
5	Mar. 23	W.B. vii. 990.....		7 31 22.12	+ 0.41	53.15		7 32 15.68	- 1.39
6		<i>γ</i> 1 L .....		7 38 6.90	+ 0.37	53.15		7 40 14.80	
7		B.Z. 279,165 .....		7 45 53.39	+ 0.37	53.16		7 46 46.92	- 1.71
8		<i>ψ</i> <sup>4</sup> Cancri .....		8 1 2.09	+ 0.37	53.17	+ 53.13	8 1 55.63	- 1.87
9		Groom. 1418 .....	5	8 12 59.90	- 1.55	53.18	*53.48	8 13 51.53	- 17.71
10		Rad. 4881 ... S.P.	5	8 27 38.00	+ 2.23	53.19	*53.00	20 28 33.42	+ 13.98
11		Rad. 4894 ... S.P.	5	8 29 21.90	+ 2.24	53.19	*53.95	20 30 17.33	+ 14.18
12		6 Urse Majoris...	5	8 43 35.00	+ 0.14	53.20		8 44 28.34	- 4.27
13		17 Hydræ (South)		8 47 40.10	+ 0.42	53.20		8 48 33.72	- 1.61
14		B.A.C. 3144 .....		9 5 39.65	+ 0.35	53.21	53.06	9 6 33.21	- 2.48
15		41 Lynceis .....		9 18 29.99	+ 0.30	53.22	53.21	9 19 23.51	- 2.99
16		8 Leonis Min. ...		9 22 2.33	+ 0.35	53.22		9 22 55.90	- 2.58
17		ε Hydræ .....		9 31 44.25	+ 0.41	53.23	53.42	9 32 37.89	- 1.87
18		19 Leonis .....		9 38 56.29	+ 0.40	53.23		9 39 49.92	- 2.08
19		R.H.C. 3347. S.P.	5	9 51 0.60	+ 3.04	53.24		21 51 56.88	+ 26.86
20		35 Leonis .....		10 7 48.92	+ 0.37	53.25		10 8 42.54	- 2.42
21		B.A.C. 3567 .....		10 18 26.66	+ 0.30	53.26		10 19 20.22	- 3.47
22		ι Leonis .....		10 40 56.09	+ 0.40	53.27	53.27	10 41 49.76	- 2.23
23		R.H.C. 3509 S.P.	5	10 49 26.40	+ 2.05	53.28		22 50 21.73	+ 17.22
24		Lalande 21185 ...		10 54 43.35	+ 0.34	53.28		10 55 36.97	- 2.92
25	Mar. 24	<i>ψ</i> <sup>4</sup> Cancri .....		8 1 1.28	+ 0.22	54.10	54.08	8 1 55.60	- 1.86
26		<i>ν</i> <sup>4</sup> Cancri (1st) ...		8 17 20.33	+ 0.23	54.11		8 18 14.67	- 1.93
27		Rad. 4881 ... S.P.	5	8 27 36.60	+ 2.71	54.11	*54.11	20 28 33.42	+ 13.81
28		<i>γ</i> 1 L .....		8 38 39.52	+ 0.23	54.12		8 40 45.32	
29		6 Urse Majoris...	5	8 43 34.46	- 0.10	54.12		8 44 28.48	- 4.24
30		17 Hydræ (North)		8 47 39.16	+ 0.31	54.13		8 48 33.60	- 1.60
31		ξ Cancri .....		9 0 18.98	+ 0.23	54.13	54.25	9 1 13.34	- 2.12
32		83 Cancri .....		9 10 10.73	+ 0.24	54.14	54.20	9 11 5.11	- 2.07
33		Radcliffe 2320 ...	5	9 15 12.00	- 1.86	+ 54.14	+ *53.78	9 16 4.28	- 17.64
6 Duration of transit of semi-diameter applied, + 74.38.					28 Duration of transit of semi-diameter applied, + 71.45.				

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Mar. 24	$\gamma^1$ Hydræ (North)		9 21 4'09	+ 0'30	+ 54'15		9 21 58'54	- 1'79
2		Radcliffe 2368 ...	5	9 30 39'30	- 4'11	54'15	+ *54'73	9 31 29'34	- 35'89
3		$\iota$ Hydræ .....		9 31 43'68	+ 0'29	54'15	54'10	9 32 38'12	- 1'86
4		19 Leonis .....		9 38 55'25	+ 0'27	54'16		9 39 49'68	- 2'06
5		24 Leonis Min. ...		10 7 32'86	+ 0'21	54'17		10 8 27'24	- 2'55
6		$\mu$ Ursæ Majoris ..		10 12 59'99	+ 0'14	54'18		10 13 54'31	- 3'04
7		B.A.C. 3567 .....		10 18 25'95	+ 0'10	54'18		10 19 20'23	- 3'47
8		B.A.C. 3627 .....		10 27 19'86	+ 0'34	54'19	54'03	10 28 14'39	- 1'82
9		(R) Ursæ Majoris	5	10 33 44'28	- 0'21	54'19		10 34 38'26	- 6'10
10		$\iota$ Leonis .....		10 40 55'23	+ 0'27	54'19	54'25	10 41 49'69	- 2'23
11		B.A.C. 3741 .....		10 47 0'18	+ 0'19	54'20		10 47 54'57	- 2'81
12		B.A.C. 3764 .....	5	10 52 8'02	- 0'51	54'20		10 53 1'71	- 8'76
13	Mar. 26	B.A.C. 3025 .....		8 46 18'80	+ 0'30	55'66	55'81	8 47 14'76	- 2'72
14		R.H.C. 3200 S.P.	5	8 54 47'40	+ 3'13	55'67	*55'88	20 55 46'20	+ 16'68
15		Radcliffe 2295 ...	5	9 10 53'20	- 4'95	55'68	*55'91	9 11 43'93	- 40'85
16		22 Ursæ Majoris .	5	9 20 35'10	- 0'15	55'68		9 21 30'63	- 6'28
17		$\iota$ Hydræ .....		9 31 41'99	+ 0'47	55'69	55'58	9 32 38'15	- 1'83
18		Regulus .....		9 59 54'23	+ 0'45	55'70	55'77	10 0 50'38	- 2'13
19		24 Leonis Min. ...		10 7 31'28	+ 0'39	55'71		10 8 27'38	- 2'53
20		$\mu$ Ursæ Majoris ..		10 12 58'06	+ 0'32	55'71		10 13 54'09	- 3'02
21		B.A.C. 3566 .....		10 18 16'25	+ 0'48	55'71	55'59	10 19 12'44	- 1'93
22		$\gamma$ 1 L. ....		10 26 36'65	+ 0'45	55'72		10 28 38'93	
23		B.A.C. 3645 .....	5	10 30 49'08	- 0'02	55'72		10 31 44'78	- 5'98
24		(R) Ursæ Majoris	5	10 33 42'70	- 0'03	55'72		10 34 38'39	- 6'06
25		$\epsilon$ Leonis .....		10 52 29'06	+ 0'45	55'73		10 53 25'24	- 2'18
26		$\chi$ Leonis .....		10 56 47'49	+ 0'45	55'73	55'74	10 57 43'67	- 2'19
27		$\xi^1$ Ursæ Majoris .	11	9 42'83	+ 0'37	55'74		11 10 38'94	- 2'78
28	Mar. 29	Radcliffe 2320 ...	5	9 15 7'10	- 1'04	58'00	*57'10	9 16 4'06	- 16'87
29		22 Ursæ Majoris .	5	9 20 32'78	+ 0'12	58'01		9 21 30'91	- 6'14
30		Radcliffe 2368 ...	5	9 30 33'20	- 2'74	58'01	*57'97	9 31 28'47	- 34'40
31		$\iota$ Hydræ .....		9 31 39'38	+ 0'56	58'01	58'08	9 32 37'95	- 1'81
32		(R) Leonis .....		9 38 58'53	+ 0'54	58'02		9 39 57'09	- 2'02
33		$\mu$ Leonis .....		9 43 44'62	+ 0'51	+ 58'02	+ 58'09	9 44 43'15	- 2'35
7 Cloudy. 9—10 Cloudy.				22 Duration of transit of semi-diameter applied, + 66'11.					

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Mar. 29	$\nu$ Leonis .....		9 49 38.25	+0.55	+58.02		9 50 36.82	-2.08
2		Groom. 3820 S.P. 5	5	10 22 39.40	+2.71	58.04	+*57.15	22 23 40.15	+21.31
3		B.A.C. 3645 ..... 5	5	10 30 46.56	+0.22	58.04		10 31 44.82	-5.89
4		(R) Urse Majoris 5	5	10 33 40.18	+0.20	58.05		10 34 38.43	-6.00
5		$\iota$ Leonis .....		10 40 51.15	+0.55	58.05	58.03	10 41 49.75	-2.20
6		B.A.C. 3747 ..... 5	5	10 47 40.30	-0.15	58.05		10 48 38.20	-10.14
7		$\epsilon$ Leonis .....		10 52 26.78	+0.56	58.05		10 53 25.39	-2.17
8		88 Leonis .....		11 23 28.75	+0.55	58.07		11 24 27.37	-2.05
9		2 Draconis ..... 5	5	11 26 48.68	+0.19	58.07		11 27 46.94	-6.35
10		Groom. 1830 ..... 5	5	11 43 51.39	+0.48	58.08		11 44 49.95	-3.04
11		B.A.C. 4059 ..... 5	5	11 54 20.99	+0.47	58.09		11 55 19.55	-3.27
12		$\epsilon$ Corvi .....		12 1 53.22	+0.58	58.09		12 2 51.89	-2.04
13		B.A.C. 4130 (1st). 5	5	12 9 10.88	-0.37	58.09		12 10 8.60	-12.62
14		72 Urse Majoris. 5	5	12 18 49.68	+0.39	58.10		12 19 48.17	-4.06
15		7 Can. Venet. ... 5	5	12 22 24.34	+0.42	58.10	58.37	12 23 22.86	-3.75
16		$\eta$ Virginis .....		12 25 30.82	+0.57	58.10	58.05	12 26 29.49	-2.13
17		$\chi$ Virginis .....		12 30 58.82	+0.57	58.10	57.96	12 31 57.49	-2.14
18		7 Draconis ..... 5	5	12 40 52.44	+0.25	58.11		12 41 50.80	-5.56
19		33 Comæ .....		12 44 22.72	+0.53	58.11		12 45 21.36	-2.44
20		$\delta$ 1 L. ....		12 49 39.92	+0.57	58.11		12 51 42.19	
21		$\delta$ 2 L. ....		12 51 47.09					
22		Oeltz. Arg. 13381 5	5	13 3 11.60	+0.21	58.12		13 4 9.93	-5.67
23		Groom. 1971 ..... 5	5	13 7 15.36	+0.23	58.12		13 8 13.71	-5.47
24		B.A.C. 4462 ..... 5	5	13 12 27.18	+0.56	58.13	58.13	13 13 25.87	-2.25
25		Spica .....		13 16 46.65	+0.57	58.13	57.96	13 17 45.35	-2.12
26		$\iota^1$ Virginis .....		13 22 4.98	+0.57	58.13		13 23 3.68	-2.15
27		$\lambda$ Virginis ..... 6	6	13 24 33.31	+0.58	58.13		13 25 32.02	-2.13
28	April 1	Regulus .....		9 59 50.12	+0.37	60.07	59.92	10 0 50.56	-2.09
29		39 Leonis .....		10 8 27.50	+0.34	60.07		10 9 27.91	-2.35
30		30 Leonis Min. ...		10 16 48.10	+0.33	60.08	60.16	10 17 48.51	-2.68
31		Groom. 3820 S.P. 5	5	10 22 37.80	+2.00	60.08	*59.97	22 23 39.88	+20.72
32		(R) Urse Majoris 5	5	10 33 38.16	+0.11	60.09		10 34 38.36	-5.92
33		Radcliffe 2560 ... 5	5	10 40 28.50	-0.98	60.09	*60.02	10 41 27.61	-21.86
34		$\alpha$ Crateris .....		10 51 53.06	+0.36	+60.10	+60.03	10 52 53.52	-1.89

11 Cloudy.

20 — 0.20 has been applied to the transit of 1 L. for defective illumination.

24 Cloudy.

27 Cloudy.

33 Scarcely visible.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	April 1	$\delta$ Virginis .....		11 51 42.18	+ 0.36	+ 60.13	+ 60.40	11 52 42.67	- 2.25
2		B.A.C. 4064 .....		11 55 31.49	+ 0.36	60.13	60.01	11 56 31.98	- 2.27
3	April 3	$\xi$ Cancri .....	5	9 0 11.44	+ 0.32	61.78	61.56	9 1 13.54	- 1.98
4		Radcliffe 2320 ...	5	9 15 2.50	- 1.42	61.79	*61.25	9 16 2.87	- 15.95
5		$\gamma$ Leo Min. ....		9 21 7.99	+ 0.29	61.80		9 22 10.08	- 2.39
6		(R) Leonis.....		9 38 55.00	+ 0.34	61.81		9 39 57.15	- 1.98
7		$\mu$ Leonis .....		9 43 40.96	+ 0.30	61.81	61.90	9 44 43.07	- 2.29
8		$\nu$ Leonis .....		9 49 34.75	+ 0.34	61.82		9 50 36.91	- 2.03
9		Regulus .....		9 59 48.22	+ 0.35	61.82	61.81	10 0 50.39	- 2.06
10		39 Leonis .....		10 8 25.56	+ 0.32	61.83		10 9 27.71	- 2.32
11		42 Leonis .....		10 13 11.96	+ 0.33	61.83	61.87	10 14 14.12	- 2.18
12		Groom. 3820 S.P.	2	10 22 36.60	+ 2.72	61.84	*60.78	22 23 41.16	+ 20.37
13		$\iota$ Leonis.....		10 40 47.40	+ 0.34	61.85	61.97	10 41 49.59	- 2.18
14		R.H.C. 3520 S.P.	5	10 52 50.50	+ 2.39	61.86		22 53 54.75	+ 18.06
15		Rad. 6099 ... S.P.	5	11 22 44.10	+ 2.84	61.87	*61.67	23 23 48.81	+ 23.07
16		Groom. 1830 .....		11 43 47.95	+ 0.26	61.89		11 44 50.10	- 3.03
17		* N.P.D. 51° 9' ...		11 46 3.26	+ 0.26	61.89		11 47 5.41	- 3.03
18	April 10	B.A.C. 3226 .....		9 20 37.70	+ 0.35	8.08		9 20 46.13	- 1.55
19		Radcliffe 2368 ...	5	9 31 17.80	- 1.39	8.09	*7.90	9 31 24.50	- 30.36
20		$\mu$ Leonis .....		9 44 34.66	+ 0.34	8.10	8.09	9 44 43.10	- 2.22
21		$\nu$ Leonis .....		9 50 28.45	+ 0.35	8.10		9 50 36.90	- 1.95
22		$\pi$ Leonis .....		9 52 35.73	+ 0.35	8.10	8.33	9 52 44.18	- 1.90
23		39 Leonis .....		10 9 19.32	+ 0.35	8.11		10 9 27.78	- 2.25
24		R.H.C. 3422 S.P.	5	10 15 37.50	+ 1.41	8.12		22 15 47.03	+ 16.25
25		Groom. 3820 S.P.	5	10 23 32.00	+ 1.57	8.12	*7.82	22 23 41.69	+ 19.19
26		38 Ursæ Majoris .	5	10 32 9.52	+ 0.23	8.13		10 32 17.88	- 5.01
27		B.A.C. 3747 .....	5	10 48 29.12	+ 0.02	8.14		10 48 37.28	- 9.49
28		B.A.C. 4009 .....		11 44 24.79	+ 0.33	8.18		11 44 33.30	- 1.97
29		B.A.C. 4037 .....		11 49 45.19	+ 0.32	8.19		11 49 53.70	- 1.99
30		B.A.C. 4064 .....		11 56 23.26	+ 0.36	8.19	8.25	11 56 31.81	- 2.28
31		$\alpha$ Corvi .....		12 0 59.48	+ 0.34	8.20	+ 7.94	12 1 8.02	- 2.05
32		B.A.C. 4111 .....	5	12 5 6.36	+ 0.03	8.20		12 5 14.59	- 9.77
33		B.A.C. 4130 (1st)	5	12 10 0.10	- 0.11	+ 8.20		12 10 8.19	- 12.28
April 10. The clock was put one minute forward.									
6 Red.				12—13 Cloudy.					

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Apr. 10	$\chi$ Virginis .....		12 31 48.86	+ 0.35	+ 8.22	+ 8.21	12 31 57.43	- 2.21
2	Apr. 13	$\alpha$ Crateris .....		10 52 41.63	+ 0.39	11.51	11.35	10 52 53.53	- 1.81
3		$\chi$ Leonis .....		10 57 31.72	+ 0.37	11.51	11.52	10 57 43.60	- 2.12
4		$\beta$ Crateris .....		11 4 30.75	+ 0.40	11.52	11.51	11 4 42.67	- 1.84
5		$\gamma$ Leonis .....		11 9 49.10	+ 0.38	11.52	11.58	11 10 1.00	- 2.10
6		B.A.C. 3861 .....		11 13 30.13	+ 0.38	11.53		11 13 42.04	- 2.15
7		$\epsilon$ Crateris .....		11 17 16.46	+ 0.39	11.53	11.62	11 17 28.38	- 1.98
8		Rad. 6099. ... S.P. 5		11 23 36.50	+ 2.55	11.54	*11.05	23 23 50.59	+21.69
9		Radcliffe 2738 ... 5		11 36 59.20	- 1.71	11.55	*11.14	11 37 9.04	-28.16
10		* N.P.D. 51° 9' ...		11 46 53.22	+ 0.30	11.56		11 47 5.08	- 3.00
11		67 Ursa Majoris ..		11 54 44.82	+ 0.29	11.56		11 54 56.67	- 3.23
12		72 Ursa Majoris . 5		12 19 36.11	+ 0.22	11.59		12 19 47.92	- 3.87
13	Apr. 15	39 Leonis .....		10 9 13.36	+ 0.18	14.17		10 9 27.71	- 2.20
14		42 Leonis .....		10 13 59.55	+ 0.18	14.17	14.31	10 14 13.90	- 2.06
15		30 Leonis Min. ...		10 17 34.05	+ 0.17	14.18	14.21	10 17 48.40	- 2.52
16		36 Ursa Majoris . 5		10 21 20.18	+ 0.12	14.18		10 21 34.48	- 3.64
17		38 Ursa Majoris . 5		10 32 3.86	+ 0.06	14.19		10 32 18.11	- 4.85
18		$\tau$ Leonis .....		11 20 26.03	+ 0.18	14.22	14.00	11 20 40.43	- 2.13
19		$\nu$ Leonis .....		11 29 28.40	+ 0.18	14.23	14.39	11 29 42.81	- 2.11
20		62 Ursa Majoris ..		11 33 58.83	+ 0.16	14.24		11 34 13.23	- 2.74
21		$\beta$ Leonis .....		11 41 36.95	+ 0.18	14.24	14.13	11 41 51.37	- 2.35
22		Groom. 4193. S.P. 3		11 52 17.70	+ 1.53	14.25	*14.41	23 52 33.48	+23.34
23		Groom. 1871..... 5		12 13 5.40	- 1.54	14.26	*14.40	12 13 18.12	-37.10
24	Apr. 17	$\lambda$ Ursa Majoris...		10 8 17.88	+ 0.29	15.77	15.82	10 8 33.94	- 2.76
25		42 Leonis .....		10 13 57.92	+ 0.34	15.77	15.76	10 14 14.03	- 2.04
26		30 Leonis Min. ...		10 17 32.25	+ 0.31	15.77	15.84	10 17 48.33	- 2.49
27		36 Ursa Majoris . 5		10 21 18.56	+ 0.23	15.78		10 21 34.57	- 3.59
28		Radcliffe 2560 ... 5		10 41 10.70	- 0.94	15.79	*15.28	10 41 25.55	-19.33
29		55 Leonis .....		10 48 9.92	+ 0.35	15.79		10 48 26.06	- 1.97
30		$\alpha$ Crateris .....		10 52 37.35	+ 0.34	15.80	15.66	10 52 53.49	- 1.79
31		$\beta$ Crateris .....		11 4 26.42	+ 0.34	15.80	15.87	11 4 42.56	- 1.81
32		$\gamma$ Leonis .....		11 9 44.92	+ 0.34	+ 15.81	+ 15.77	11 10 1.07	- 2.07
April 13. An unfavourable night.									
17. Very hazy; cloudy around the horizon.									
28 Very faint.									



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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Apr. 17	B.A.C. 3861 .....		11 13 25.85	+ 0.34	+ 15.81		11 13 42.00	- 2.12
2		80 Leonis .....		11 18 18.23	+ 0.34	15.81		11 18 34.38	- 2.12
3		2 Draconis .....	5	11 27 30.92	+ 0.09	15.82		11 27 46.83	- 5.92
4		62 Urse Majoris .		11 33 56.93	+ 0.31	15.82		11 34 13.06	- 2.74
5		$\beta$ Leonis .....		11 41 35.09	+ 0.34	15.83	+ 15.83	11 41 51.26	- 2.35
6		Groom. 1830 .....		11 44 33.92	+ 0.29	15.83		11 44 50.04	- 2.97
7		Groom. 4193 S.P. 5		11 52 16.50	+ 2.11	15.83	*15.36	23 52 34.44	+22.94
8		70 Urse Majoris .	5	12 13 45.28	+ 0.23	15.85		12 14 1.36	- 4.25
9		B.A.C. 4199 .....		12 20 18.66	+ 0.32	15.85		12 20 34.83	- 2.68
10		7 Can. Venet. ...	5	12 23 7.04	+ 0.26	15.85	15.81	12 23 23.15	- 3.73
11		$\beta$ Corvi .....		12 26 42.11	+ 0.34	15.86		12 26 58.31	- 2.13
12		$\epsilon$ Urse Majoris ...	5	12 47 34.32	+ 0.23	15.87		12 47 50.42	- 4.07
13	Apr. 19	B.A.C. 3627 .....		10 27 56.03	+ 0.22	17.83	17.75	10 28 14.08	- 1.59
14		33 Sextantis .....		10 33 54.40	+ 0.23	17.83		10 34 12.46	- 1.85
15		R.H.C. 3493 S.P. 5		10 44 36.20	+ 2.41	17.84		22 44 56.45	+24.53
16		R.H.C. 3519 S.P. 5		10 53 27.40	+ 1.59	17.84		22 53 46.83	+17.01
17		$\beta$ Crateris .....		11 4 24.46	+ 0.22	17.85	17.93	11 4 42.53	- 1.79
18		$\xi$ Urse Majoris ...		11 10. 20.42	+ 0.19	17.85		11 10 38.46	- 2.64
19		B.A.C. 3863 .....		11 13 52.96	+ 0.22	17.85	17.90	11 14 11.03	- 2.13
20		Rad. 6099 ... S.P. 5		11 23 30.20	+ 1.98	17.86	*19.00	23 23 50.04	+20.50
21		$\nu$ Leonis .....		11 29 24.86	+ 0.22	17.86	17.86	11 29 42.94	- 2.08
22		B.A.C. 3971 .....		11 34 35.58	+ 0.23	17.87		11 34 53.68	- 2.18
23		$\beta$ Leonis .....		11 41 33.09	+ 0.22	17.87	17.94	11 41 51.18	- 2.34
24		B.A.C. 4021 .....		11 46 31.50	+ 0.22	17.87	...	11 46 49.59	- 2.22
25		B.A.C. 4055 .....		11 53 38.13	+ 0.22	17.88		11 53 56.23	- 2.23
26		$\chi$ Virginis .....		12 31 39.45	+ 0.22	17.90	17.76	12 31 57.57	- 2.22
27		Groom. 1923 .....	5	12 37 17.10	- 0.97	17.90	*19.02	12 37 34.03	-18.56
28	Apr. 20	37 Leonis .....		10 8 46.16	+ 0.35	18.62		10 9 5.13	- 1.96
29		30 Leonis Min. ...		10 17 29.36	+ 0.28	18.62	18.83	10 17 48.26	- 2.46
30		45 Leonis .....		10 19 51.75	+ 0.36	18.62		10 20 10.73	- 1.94
31		B.A.C. 3628 .....		10 28 22.69	+ 0.36	18.63	18.57	10 28 41.68	- 1.95
32		80 Leonis .....		11 18 15.16	+ 0.36	18.66		11 18 34.18	- 2.10
33		Rad. 6129 ... S.P. 5		11 29 5.60	+ 3.07	+ 18.67	+ *19.03	23 29 27.34	+19.33
15 Scarcely visible.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Apr. 20	B.A.C. 3971 .....		11 34 34.63	+ 0.37	+ 18.68		11 34 53.68	- 2.18
2		$\beta$ Leonis .....		11 41 32.08	+ 0.35	18.68	+ 18.81	11 41 51.11	- 2.33
3		B.A.C. 4021 .....		11 46 30.70	+ 0.37	18.68		11 46 49.75	- 2.22
4		* N.P.D. 46° 3' ...		11 54 47.69	+ 0.23	18.69		11 55 6.61	- 3.20
5		$\alpha$ Corvi .....		12 0 48.82	+ 0.42	18.69	18.50	12 1 7.93	- 2.03
6		B.A.C. 4130 (1st). 5		12 9 49.80	- 0.83	18.70		12 10 7.67	- 11.76
7		17 Virginis .....		12 15 2.06	+ 0.37	18.70		12 15 21.13	- 2.31
8		B.A.C. 4199 .....		12 20 15.55	+ 0.31	18.71		12 20 34.57	- 2.67
9		Oeltz. Arg. 12731. 5		12 25 26.12	- 0.08	18.71		12 25 44.75	- 5.81
10		6 Draconis .....	5	12 28 29.82	- 0.14	18.71		12 28 48.39	- 6.20
11		Groom. 1923..... 5		12 37 17.60	- 1.66	18.72	* 19.11	12 37 34.66	- 18.48
12		33 Comæ .....		12 45 2.33	+ 0.33	18.72		12 45 21.38	- 2.52
13		12 Can. Venat. ...		12 49 7.02	+ 0.25	18.73	18.63	12 49 26.00	- 3.05
14	Apr. 21	33 Sextantis .....		10 33 52.68	+ 0.34	19.81		10 34 12.83	- 1.84
15		Radcliffe 2560 ... 5		10 41 6.70	- 2.05	19.81	* 19.64	10 41 24.46	- 18.69
16		R.H.C. 3509 S.P. 5		10 50 2.20	+ 2.47	19.82		22 50 24.49	+ 13.54
17		Lalande 21185 ...		10 55 16.70	+ 0.22	19.83		10 55 36.75	- 2.70
18		$\xi$ Ursæ Maj. (1st)		11 10 18.46	+ 0.24	19.84		11 10 38.54	- 2.62
19		$\epsilon$ Leonis.....		11 16 13.33	+ 0.31	19.84	19.84	11 16 33.48	- 2.19
20		83 Leonis (1st) ...		11 19 16.09	+ 0.32	19.85		11 19 36.26	- 2.09
21		58 Ursæ Majoris .		11 22 32.42	+ 0.19	19.85	19.96	11 22 52.46	- 3.08
22		59 Ursæ Majoris .		11 30 28.83	+ 0.18	19.85	19.98	11 30 48.86	- 3.13
23		Groom. 1830.....		11 44 29.93	+ 0.21	19.87		11 44 50.01	- 2.94
24		* N.P.D. 51° 9' ...		11 46 45.26	+ 0.21	19.87		11 47 5.34	- 2.96
25		$\alpha$ Corvi .....		12 0 47.70	+ 0.37	19.88	19.65	12 1 7.95	- 2.01
26		B.A.C. 4111 .....	4	12 4 54.81	- 0.60	19.88		12 5 14.09	- 9.30
27		B.A.C. 4130 (2d). 5		12 9 52.20	- 0.90	19.89		12 10 11.19	- 11.71
28		17 Virginis .....		12 15 1.12	+ 0.33	19.89		12 15 21.34	- 2.31
29		B.A.C. 4199 .....		12 20 14.63	+ 0.26	19.89		12 20 34.78	- 2.66
30		4 Draconis .....	5	12 23 38.20	- 0.17	19.90		12 23 57.93	- 5.96
31		B.A.C. 4238 .....		12 26 59.79	+ 0.31	19.90		12 27 20.00	- 2.35
32		B.A.C. 4250 .....		12 29 38.56	+ 0.32	19.90		12 29 58.78	- 2.37
33		Groom. 144...S.P. 5		12 44 43.80	+ 7.46	19.91	* 19.58	0 45 11.17	+ 54.19
34		$\theta$ Virginis .....		13 2 18.21	+ 0.34	+ 19.93	+ 19.92	13 2 38.48	- 2.30
33, 34 Very hazy.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Apr. 23	Radcliffe 2560 ...	5	10 41 5'00	- 2'20	+ 22'01	+ 21'10	10 41 24'81	-18'33
2		55 Leonis .....		10 48 3'82	+ 0'26	22'02		10 48 26'10	-1'92
3		Lalande 21185 ...		10 55 14'46	+ 0'15	22'02		10 55 36'63	-2'67
4		) 1 L. ....		11 0 20'92	+ 0'25	22'03		11 1 47'70	
5		ξ <sup>3</sup> Ursæ Majoris .		11 10 16'56	+ 0'17	22'04		11 10 38'77	-2'60
6		τ Leonis .....		11 20 17'89	+ 0'26	22'04	22'02	11 20 40'19	-2'09
7		89 Leonis .....		11 26 45'72	+ 0'26	22'05	22'05	11 27 8'03	-2'10
8		B.A.C. 3969 .....		11 34 18'58	+ 0'32	22'06		11 34 40'96	-1'86
9		B.A.C. 4055 .....		11 53 34'16	+ 0'26	22'07		11 53 56'49	-2'32
10		B.A.C. 4111 .....	5	12 4 52'84	- 0'71	22'08		12 5 14'21	-9'21
11		B.A.C. 4130 (2d) 5		12 9 50'22	-1'03	22'08		12 10 11'27	-11'57
12		17 Virginis .....		12 14 58'93	+ 0'25	22'09		12 15 21'27	-2'30
13		20 Comæ .....		12 22 15'39	+ 0'20	22'09		12 22 37'68	-2'56
14		γ Virginis .....		12 26 7'19	+ 0'29	22'09	22'03	12 26 29'57	-2'20
15		γ Virginis (South)		12 34 8'08	+ 0'26	22'10	22'04	12 34 30'44	-2'26
16		Groom. 144...S.P. 5		12 44 42'80	+ 7'67	22'11	*21'00	0 45 12'58	+53'73
17		ψ Virginis .....		12 46 38'15	+ 0'29	22'11	22'27	12 47 0'55	-2'24
18		9 Draconis .....	5	12 54 16'22	- 0'19	22'12		12 54 38'15	-5'37
19		B.A.C. 4392 .....	5	13 0 28'58	- 0'09	22'12		13 0 50'61	-4'67
20	Apr. 24	Lalande 21185 ...		10 55 13'48	+ 0'11	23'14		10 55 36'73	-2'66
21		ε Leonis .....		11 16 10'09	+ 0'16	23'15	23'21	11 16 33'40	-2'17
22		τ Leonis .....		11 20 16'93	+ 0'17	23'16	23'06	11 20 40'26	-2'08
23		89 Leonis .....		11 26 44'76	+ 0'17	23'16	23'10	11 27 8'09	-2'10
24		B.A.C. 4009 .....		11 44 9'98	+ 0'17	23'17		11 44 33'32	-1'91
25		) 1 L. ....		11 47 20'62	+ 0'17	23'18		11 48 47'38	
26		B.A.C. 4055 .....		11 53 33'12	+ 0'17	23'18		11 53 56'47	-2'21
27		10 Virginis .....		12 2 3'76	+ 0'17	23'19	23'16	12 2 27'12	-2'22
28		γ Virginis .....		12 12 17'36	+ 0'17	23'20	23'33	12 12 40'73	-2'21
29		20 Comæ .....		12 22 14'30	+ 0'14	23'20		12 22 37'64	-2'55
30		B.A.C. 4259 .....	6	12 31 41'85	+ 0'18	23'21		12 32 5'24	-2'22
31		Groom. 1923 .....	5	12 37 12'50	-1'24	23'21	*23'42	12 37 34'47	-18'19
32		2 Ursæ Min. S.P. 5		12 49 17'80	+ 2'14	23'22	*23'40	0 49 43'16	+20'00
33		ε Virginis .....		12 54 45'79	+ 0'16	+ 23'23	+ 23'05	12 55 9'18	-2'45
4 Duration of transit of semi-diameter applied, + 64".50.					24-28 Cloudy.				
8 Of at least 5.0 magnitude.					25 Duration of transit of semi-diameter applied, + 63".41.				
					30-33 Cloudy.				

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Apr. 30	$\gamma$ Virginis .....		12 12 12.48	+0.55	+27.70	+27.81	12 12 40.73	-2.19
2		$\gamma$ Virginis (South) .....		12 34 2.12	+0.56	27.71	27.69	12 34 30.39	-2.25
3		$\gamma$ Draconis .....	5	12 41 22.60	+0.19	27.71		12 41 50.50	-5.27
4		$\beta$ Virginis .....		12 45 29.18	+0.57	27.71	27.58	12 45 57.46	-2.28
5		$\delta$ Draconis .....	5	12 49 25.56	+0.22	27.71		12 49 53.49	-5.05
6		Groom. 1947 .....	5	12 53 20.28	+0.14	27.71		12 53 48.13	-5.66
7		$\rho$ Virginis .....		13 0 1.79	+0.57	27.72	27.75	13 0 30.08	-2.29
8		$\delta$ Virginis (ad) .....		13 5 26.22	+0.57	27.72		13 5 54.51	-2.28
9		$\epsilon$ Virginis .....		13 10 33.12	+0.58	27.72	27.70	13 11 1.42	-2.30
10		W.B. xiii. 375 .....		13 23 2.72	+0.57	27.72		13 23 31.01	-2.33
11		W.B. xiii. 438 .....		13 26 25.73	+0.57	27.72		13 26 54.02	-2.37
12		B.A.C. 4555 .....	5	13 31 13.54	+0.37	27.73		13 31 41.64	-3.71
13	May 1	Groom. 144... S.P. ....	5	12 44 39.80	+6.85	28.14	*27.78	0 45 14.79	+50.45
14		$\theta$ Virginis .....		13 2 9.65	+0.63	28.15	28.21	13 2 38.43	-2.32
15		$\epsilon$ Virginis .....		13 9 17.46	+0.61	28.15	28.04	13 9 46.22	-2.46
16		$\zeta$ Virginis .....		13 27 1.22	+0.62	28.15	28.19	13 27 29.99	-2.41
17		Radcliffe 3075 .....	3	13 35 27.70	-1.92	28.16	*27.70	13 35 53.94	-23.34
18	May 3	$\gamma$ Draconis .....	5	12 41 20.98	+0.08	29.36		12 41 50.42	-5.19
19		$\beta$ Comae .....		12 44 41.30	+0.40	29.36		12 46 11.06	-2.51
20		$\delta$ Virginis .....		12 47 59.70	+0.43	29.37	29.40	12 48 29.50	-2.34
21		Radcliffe 2967 .....	5	13 1 37.90	-2.51	29.37	*29.43	13 2 4.76	-27.63
22		$\epsilon$ Virginis .....		13 9 16.32	+0.43	29.38	29.36	13 9 46.13	-2.46
23		B.A.C. 4473 .....		13 14 41.39	+0.45	29.38	29.40	13 15 11.22	-2.36
24		$\gamma$ Virginis .....		13 21 1.79	+0.41	29.38		13 21 31.58	-2.53
25		Radcliffe 467 S.P. ....	5	13 27 6.00	+2.31	29.38	*29.49	1 27 37.69	+14.79
26		$\delta$ Ursae Majoris .....	5	13 33 34.44	+0.26	29.39		13 34 4.09	-3.72
27		$\delta$ Virginis .....		13 37 29.36	+0.46	29.39	29.21	13 37 59.21	-2.41
28		$\eta$ Ursae Majoris .....		13 41 30.19	+0.28	29.39	29.52	13 41 59.86	-3.48
29	May 5	B.A.C. 4024 .....		11 47 0.18	+0.48	30.77		11 47 31.43	-1.87
30		$\delta$ Virginis .....		11 52 11.52	+0.44	30.77	30.88	11 52 42.73	-2.15
31		Groom. 1850 .....	5	11 57 27.30	-2.46	30.77	+*31.51	11 57 55.61	-24.32
32		B.A.C. 4112 .....	5	12 5 7.70	-0.39	+30.78		12 5 38.09	-8.58
13 Cloudy.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 5	B.A.C. 4130 (2d).	5	12 9 40.02	-0.65	+30.78		12 10 10.15	-10.61
2		Groom. 1889 .....	5	12 17 54.00	-1.42	30.79	+30.83	12 18 23.37	-16.67
3		B.A.C. 4213 .....		12 22 17.00	+0.47	30.79		12 22 48.26	-2.13
4		$\kappa$ Draconis.....	5	12 26 58.94	-0.01	30.79		12 27 29.72	-5.70
5		* N.P.D. 20° 41'.	5	12 32 4.10	+0.03	30.79		12 32 34.92	-5.44
6		Oeltz. Arg. 12906.	5	12 34 44.80	+0.03	30.80		12 35 15.63	-5.45
7		$\psi$ Virginis .....		12 46 29.38	+0.47	30.80	30.86	12 47 0.65	-2.24
8		Groom. 1947 .....	5	12 53 17.22	+0.02	30.81		12 53 48.05	-5.53
9		B.A.C. 4392 .....	5	13 0 19.34	+0.15	30.81		13 0 50.30	-4.50
10		55 Virginis .....		13 6 6.56	+0.47	30.81		13 6 37.84	-2.29
11		B.A.C. 4473 .....		13 14 39.86	+0.46	30.82	30.92	13 15 11.14	-2.36
12		B.A.C. 4497 .....	5	13 20 41.98	+0.13	30.82		13 21 12.93	-4.64
13		Radcliffe 467 S.P.	5	13 27 4.40	+2.55	30.82	*31.07	1 27 37.77	+14.61
14		82 Ursæ Majoris.	5	13 33 33.18	+0.26	30.83		13 34 4.27	-3.70
15		85 Virginis .....		13 37 27.93	+0.48	30.83	30.62	13 37 59.24	-2.41
16		$\eta$ Ursæ Majoris...		13 41 28.93	+0.28	30.83	30.77	13 42 0.04	-3.47
17		B.A.C. 4634 .....		13 45 14.62	+0.41	30.83		13 45 45.86	-2.62
18		Lalande 25653 ...		13 49 24.06	+0.37	30.84		13 49 55.27	-2.89
19	May 6	Groom. 1830 .....		11 44 17.98	+0.42	31.62		11 44 50.02	-2.77
20		B.A.C. 4055 .....		11 53 24.22	+0.51	31.62		11 53 56.35	-2.15
21		$\epsilon$ Corvi .....		12 2 19.62	+0.54	31.63		12 2 51.79	-1.97
22		$\delta$ Ursæ Majoris...	5	12 7 54.70	+0.30	31.63		12 8 26.63	-3.84
23		Groom. 1892 .....	5	12 19 8.90	-1.13	31.64	*31.45	12 19 39.41	-16.02
24		Oeltz. Arg. 12731.	5	12 25 12.66	+0.13	31.64		12 25 44.43	-5.37
25		B.A.C. 4250 .....		12 29 26.48	+0.50	31.65		12 29 58.63	-2.34
26		B.A.C. 4306 .....		12 42 16.49	+0.53	31.65		12 42 48.67	-2.24
27		33 Comæ .....		12 44 49.28	+0.48	31.66		12 45 21.42	-2.50
28		$\delta$ Virginis .....		12 47 57.29	+0.51	31.66	31.74	12 48 29.46	-2.35
29		Groom. 1947 .....	5	12 53 16.30	+0.11	31.66		12 53 48.07	-5.50
30		B.A.C. 4392 .....	5	13 0 18.60	+0.25	31.67		13 0 50.52	-4.47
31		55 Virginis .....		13 6 5.62	+0.54	31.67		13 6 37.83	-2.29
32		B.A.C. 4473 .....		13 14 39.05	+0.53	31.67	31.66	13 15 11.25	-2.36
33		66 Virginis .....		13 16 40.22	+0.52	31.68	+31.59	13 17 12.42	-2.37
34		B.A.C. 4502 .....		13 21 28.08	+0.52	+31.68		13 22 0.28	-2.40
5 Very faint; difficult to observe. 13 Cloudy.					15 Cloudy. 20 Hazy.				

## LAMP EAST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 6	Radcliffe 467 S.P.	5	13 27 42.0	+ 2.47	+ 31.68	+ 31.48	1 27 38.35	+ 14.51
2		82 Ursæ Majoris	5	13 33 32.32	+ 0.34	31.69		13 34 4.35	- 3.69
3		Rümker 4459	6	13 39 25.75	+ 0.51	31.69		13 39 57.95	- 2.51
4		B.A.C. 4628	5	13 44 24.08	+ 0.45	31.69	31.62	13 44 56.22	- 2.93
5		Lalande 25653		13 49 23.28	+ 0.45	31.70		13 49 55.43	- 2.88
6		$\tau$ Virginis		13 53 55.70	+ 0.51	31.70	31.80	13 54 27.91	- 2.49
7	May 7	B.A.C. 4037		11 49 20.48	+ 0.42	32.58		11 49 53.48	- 1.84
8		* N.P.D. 46° 3'		11 54 33.98	+ 0.26	32.58		11 55 6.82	- 2.99
9		B.A.C. 4059		11 54 46.40	+ 0.26	32.58	32.42	11 55 19.24	- 2.99
10		$\epsilon$ Corvi		12 2 18.68	+ 0.40	32.58		12 2 51.66	- 1.96
11		B.A.C. 4119		12 6 28.20	+ 0.39	32.59	32.55	12 7 1.18	- 2.10
12		B.A.C. 4143	5	12 12 0.02	- 0.28	32.59		12 12 32.33	- 7.22
13		Groom. 1889	5	12 17 52.30	- 1.44	32.59	* 32.23	12 18 23.45	- 16.40
14		B.A.C. 4214		12 22 21.02	+ 0.41	32.60		12 22 54.03	- 2.07
15		23 Comæ		12 27 15.99	+ 0.33	32.60		12 27 48.92	- 2.54
16		B.A.C. 4259		12 31 32.20	+ 0.39	32.60		12 32 5.19	- 2.19
17		32 Comæ		12 44 38.09	+ 0.34	32.61		12 45 11.04	- 2.50
18		$\delta$ Virginis		12 47 56.40	+ 0.38	32.61	32.76	12 48 29.39	- 2.35
19		9 Draconis	5	12 54 5.14	+ 0.02	32.62		12 54 37.78	- 5.08
20		B.A.C. 4392	5	13 0 17.64	+ 0.09	32.62		13 0 50.35	- 4.45
21		54 Virginis (2d)		13 5 21.43	+ 0.40	32.63		13 5 54.46	- 2.29
22		B.A.C. 4462	6	13 12 53.12	+ 0.37	32.63	32.55	13 13 26.12	- 2.42
23		66 Virginis		13 16 39.22	+ 0.39	32.63	32.73	13 17 12.24	- 2.38
24		(R) Hydræ		13 21 27.05	+ 0.41	32.64	32.65	13 22 0.10	- 2.35
25		Radcliffe 467 S.P.	4	13 27 3.60	+ 2.44	32.64	* 32.24	1 27 38.68	+ 14.60
26		B.A.C. 4555	5	13 31 8.52	+ 0.19	32.64		13 31 41.35	- 3.67
27		82 Ursæ Majoris	5	13 33 31.22	+ 0.19	32.65		13 34 4.06	- 3.69
28		Rümker 4459		13 39 24.78	+ 0.38	32.65		13 39 57.81	- 2.52
29		$\tau$ Virginis		13 53 54.95	+ 0.38	32.66	+ 32.68	13 54 27.99	- 2.49
30		$\pi$ Hydræ		13 57 47.12	+ 0.42	32.66		13 58 20.20	- 2.52
31		W.B. xiii. 1058	5	13 59 47.56	+ 0.40	32.66		14 0 20.62	- 2.49
32		B.A.C. 4711		14 4 36.30	+ 0.42	32.67		14 5 9.39	- 2.54
33		$\kappa^1$ Boötis	5	14 7 53.18	+ 0.21	+ 32.67		14 8 26.06	- 3.59
7 Very faint. 21 Companion (7.5) sp.					24 Dull and red.				

LAMP EAST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 8	$\epsilon$ Corvi .....	12	2 17'70	+ 0'47	+ 33'57		12 2 51'74	- 1'96
2		B.A.C. 4119 .....	12	6 27'26	+ 0'44	33'57	+ 33'44	12 7 1'27	- 2'10
3		B.A.C. 4143 .....	5	12 11 59'04	- 0'47	33'58		12 12 32'15	- 7'17
4		Groom. 1892 .....	5	12 19 7'40	- 1'89	.....	*33'42	.....	.....
5		7 Can. Venat. ...	5	12 22 48'76	+ 0'17	33'59		12 23 22'52	- 3'48
6		24 Comæ (1st) ...	4	12 27 27'55	+ 0'37	33'59		12 28 1'51	- 2'46
7		24 Comæ (2d) ...	5	12 27 28'98	+ 0'37	33'59		12 28 2'94	- 2'46
8		$\chi$ Virginis .....	6	12 31 23'55	+ 0'44	33'59	33'40	12 31 57'58	- 2'18
9		B.A.C. 4306 .....		12 42 14'53	+ 0'44	33'60		12 42 48'57	- 2'24
10		32 Comæ .....		12 44 37'08	+ 0'37	33'60		12 45 11'05	- 2'49
11		$\delta$ Virginis .....		12 47 55'39	+ 0'41	33'60	33'73	12 48 29'40	- 2'34
12		$\epsilon$ Virginis .....		12 54 34'90	+ 0'39	33'61	33'70	12 55 8'90	- 2'44
13		53 Virginis .....	13	3 58'79	+ 0'46	33'61		13 4 32'86	- 2'29
14		57 Virginis .....	13	7 46'93	+ 0'46	33'62		13 8 21'01	- 2'30
15		B.A.C. 4462 .....	13	12 51'92	+ 0'42	33'62	33'71	13 13 25'96	- 2'43
16	May 10	Oeltz. Arg. 12417.	5	12 3 5'36	+ 0'06	35'48		12 3 40'90	- 5'16
17		B.A.C. 4143 .....	5	12 11 57'52	- 0'11	35'48		12 12 32'89	- 7'08
18		Groom. 1892 .....	5	12 19 5'00	- 0'92	35'49	*34'54	12 19 39'57	- 15'44
19		24 Comæ (1st) ...	5	12 27 25'56	+ 0'33	35'49		12 28 1'38	- 2'45
20		24 Comæ (2d) ...	4	12 27 27'10	+ 0'33	35'49		12 28 2'92	- 2'45
21		B.A.C. 4259 .....	6	12 31 29'27	+ 0'36	35'49		12 32 5'12	- 2'17
22		B.A.C. 4306 .....		12 42 12'69	+ 0'36	35'50		12 42 48'55	- 2'23
23		33 Comæ .....		12 44 45'69	+ 0'33	35'50		12 45 21'52	- 2'48
24		12 Can. Ven. (1st)	5	12 48 48'92	+ 0'30	35'50	35'38	12 49 24'72	- 2'96
25		$\epsilon$ Virginis .....		12 54 33'12	+ 0'35	35'50	35'52	12 55 8'97	- 2'44
26		$\alpha$ Comæ .....	13	2 31'53	+ 0'33	35'51	35'57	13 3 7'37	- 2'55
27		Groom. 1971 .....	5	13 7 37'72	+ 0'08	35'51		13 8 13'31	- 5'14
28		Oeltz. Arg. 13530.	5	13 12 59'00	+ 0'08	35'51		13 13 34'59	- 5'21
29		$\zeta^2$ Ursæ Majoris .	5	13 17 41'18	+ 0'21	35'52		13 18 16'91	- 3'79
30		B.A.C. 4496 .....		13 20 26'33	+ 0'36	35'52	35'52	13 21 2'21	- 2'40
31		$\zeta$ Virginis .....		13 26 54'13	+ 0'36	35'52	35'55	13 27 30'01	- 2'42
32		B.A.C. 4577 .....	5	13 36 34'02	+ 0'12	35'52		13 37 9'66	- 4'76
33		84 Ursæ Majoris .	5	13 40 45'54	+ 0'22	35'53		13 41 21'29	- 3'76
34		Radcliffe 606 S.P.	5	13 58 37'40	+ 4'58	+ 35'53	+ *34'62	1 59 17'51	+ 41'42
May 8. Hazy and cloudy.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 11	B.A.C. 4143 .....	5	12 11 56.70	-0.15	+36.03		12 12 32.58	-6.98
2		4 Draconis .....	5	12 23 21.34	+0.07	36.03		12 23 57.44	-5.35
3		$\kappa$ Draconis .....	5	12 26 53.58	+0.06	36.03		12 27 29.67	-5.49
4		6 Draconis .....	5	12 28 11.78	+0.06	36.03		12 28 47.87	-5.54
5		Oeltz. Arg. 12906. 5	5	12 34 39.72	+0.10	36.04		12 35 15.86	-5.25
6		B.A.C. 4306 .....		12 42 12.05	+0.52	36.04		12 42 48.61	-2.23
7		12 Can. Ven. (1st)		12 48 48.00	+0.41	36.04	+ 36.18	12 49 24.45	-2.95
8		78 Ursæ Majoris ..	5	12 54 5.10	+0.29	36.04		12 54 41.43	-3.84
9		$\alpha$ Comæ .....	13	2 30.76	+0.47	36.05	36.19	13 3 7.28	-2.54
10		54 Virginis (1st) ..	5	13 5 17.64	+0.53	36.05		13 5 54.22	-2.27
11		54 Virginis (2d) ..	4	13 5 17.83	+0.53	36.05		13 5 54.41	-2.27
12		Oeltz. Arg. 13530. 5	5	13 12 58.48	+0.11	36.05		13 13 34.64	-5.18
13		$\zeta^1$ Ursæ Majoris ..	5	13 17 40.48	+0.31	36.05		13 18 16.84	-3.78
14		Radcliffe 3075 ...	5	13 35 18.20	-2.11	36.06	*36.00	13 35 52.15	-22.05
15		$\eta$ Ursæ Majoris...		13 41 23.63	+0.35	36.06	35.98	13 42 0.04	-3.45
16		$\eta$ Boötis .....		13 47 21.69	+0.48	36.07	35.96	13 47 58.24	-2.65
17		Piazzi xiii. 291 ...	5	13 57 6.80	+0.54	36.07		13 57 43.41	-2.50
18		Radcliffe 606 S.P. 5	5	13 58 34.56	+6.28	36.07	*36.06	1 59 16.91	+41.09
19		B.A.C. 4707 .....		14 3 52.25	+0.52	36.07		14 4 28.84	-2.51
20		$\kappa^1$ Boötis .....	5	14 7 50.86	+0.34	36.08		14 8 27.28	-3.57
21		18 Boötis .....		14 11 50.15	+0.50	36.08		14 12 26.73	-2.62
22		2 Libræ .....		14 15 13.55	+0.54	36.08	36.00	14 15 50.17	-2.54
23	May 12	12 Can. Venat. (2d)		12 48 48.79	+0.40	36.71	36.59	12 49 25.90	-2.93
24		$\zeta^1$ Ursæ Majoris ..	5	13 17 38.70	+0.29	36.72		13 18 15.71	-3.75
25		B.A.C. 4527 .....	5	13 25 19.94	-0.40	36.72		13 25 56.26	-9.12
26		Rümker 4459 ...		13 39 20.63	+0.49	36.73		13 39 57.85	-2.50
27		$\eta$ Ursæ Majoris...	5	13 41 22.80	+0.34	36.73	36.81	13 41 59.87	-3.44
28		* N.P.D. 23° 19' ..	5	13 45 57.18	+0.16	36.73		13 46 34.07	-4.87
29		B.A.C. 4658 .....		13 50 15.73	+0.51	36.73		13 50 52.97	-2.48
30		B.A.C. 4682 .....		13 56 55.42	+0.52	36.73	36.69	13 57 32.67	-2.49
31		97 Virginis .....		14 4 24.98	+0.51	36.74	36.66	14 5 2.23	-2.51
32		2 Libræ .....		14 15 12.69	+0.51	36.74		14 15 49.94	-2.55
33		$\theta$ Boötis .....	5	14 19 48.06	+0.32	36.74		14 20 25.12	-3.55
34		$\rho$ Boötis .....		14 25 8.13	+0.42	+36.75	+ 36.90	14 25 45.30	-2.85
23. Clouded and faint.									



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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 15	18 Can. Venat. ...		13 4 25.38	+ 0.35	+ 38.86	+ 38.84	13 5 4.59	- 3.03
2		Oeltz. Arg. 13530.	5	13 12 55.28	+ 0.12	38.87		13 13 34.27	- 5.07
3		$\zeta^1$ Ursæ Majoris .	5	13 17 36.44	+ 0.27	38.87		13 18 15.58	- 3.72
4		$\zeta^2$ Ursæ Majoris .	4	13 17 37.34	+ 0.27	38.87		13 18 16.48	- 3.72
5		Radcliffe 467 S.P.	5	13 26 58.20	+ 2.12	38.88	*39.08	1 27 39.20	+13.20
6		Groom. 2099 .....	2	14 4 30.20	- 1.92	38.89	*39.12	14 5 7.17	-23.44
7		Arcturus .....		14 8 34.53	+ 0.39	38.90	38.92	14 9 13.82	- 2.66
8	May 18	$\epsilon$ Ursæ Majoris ...	5	12 47 8.18	+ 0.30	41.74		12 47 50.22	- 3.66
9		B.A.C. 4348 (1st)	5	12 49 24.96	+ 0.31	41.74	41.73	12 50 7.01	- 3.55
10		78 Ursæ Majoris .	5	12 53 59.36	+ 0.31	41.74		12 54 41.41	- 3.72
11		$\theta$ Virginis .....		13 1 56.26	+ 0.36	41.75	41.85	13 2 38.37	- 2.30
12		$\beta$ Comæ .....		13 4 35.19	+ 0.37	41.75		13 5 17.31	- 2.68
13		Oeltz. Arg. 13530.	5	13 12 52.60	+ 0.24	41.76		13 13 34.60	- 4.99
14		82 Ursæ Majoris .	5	13 33 22.16	+ 0.32	41.77		13 34 4.25	- 3.57
15		$\eta$ Ursæ Majoris...		13 41 17.96	+ 0.33	41.77	41.61	13 42 0.06	- 3.39
16		$\eta$ Boötis.....		13 47 16.00	+ 0.36	41.78	41.76	13 47 58.14	- 2.64
17		48 Hydræ .....		13 51 24.03	+ 0.34	41.78		13 52 6.15	- 2.51
18		$\pi$ Hydræ .....		13 57 38.28	+ 0.34	41.78		13 58 20.40	- 2.56
19		Radcliffe 693 S.P.	3	14 17 3.35	+ 3.36	41.80	*41.99	2 17 48.51	+45.79
20		Radcliffe 3250 ...	5	14 31 30.60	- 1.91	41.81	*41.89	14 32 10.50	-40.20
21		$\alpha^2$ Libræ .....		14 42 22.26	+ 0.36	41.81	41.88	14 43 4.43	- 2.66
22	May 22	$\theta$ Virginis .....		13 1 52.49	+ 0.47	45.49	45.50	13 2 38.45	- 2.29
23		57 Virginis .....		13 7 34.95	+ 0.48	45.49		13 8 20.92	- 2.26
24		$\zeta^1$ Ursæ Majoris .	5	13 17 29.88	+ 0.29	45.50		13 18 15.67	- 3.60
25		$\eta$ Ursæ Majoris...	5	13 18 49.54	+ 0.29	45.50		13 19 35.33	- 3.61
26		B.A.C. 4515 .....		13 23 45.55	+ 0.46	45.50		13 24 31.51	- 2.40
27		24 Can. Venat. ...	5	13 27 56.16	+ 0.33	45.51	45.73	13 28 42.00	- 3.32
28		B.A.C. 4555 .....	5	13 30 55.56	+ 0.31	45.51		13 31 41.38	- 3.49
29		B.A.C. 4577 .....	5	13 36 23.64	+ 0.18	45.51		13 37 9.33	- 4.50
30		89 Virginis .....		13 41 26.30	+ 0.47	45.51		13 42 12.28	- 2.44
31		Lalande 25653 ...	5	13 49 9.26	+ 0.41	45.52	45.73	13 49 55.19	- 2.83
32		B.A.C. 4682 .....		13 56 46.80	+ 0.48	45.52	45.37	13 57 32.80	- 2.51
33		Groom. 2099 .....	5	14 4 23.20	- 2.03	+45.53	+*44.91	14 5 6.70	-22.29
5-7. Cloudy. 7. Faint.					32. Cloudy.				

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 22	Radcliffe 693 S.P.	3	14 16 59.35	+ 6.33	+45.54	+44.76	2 17 51.22	+44.37
2		B.A.C. 4826 .....	5	14 28 8.66	+ 0.31	45.54		14 28 54.51	- 3.54
3		$\pi^3$ Boötis .....		14 33 20.42	+ 0.44	45.55		14 34 6.41	- 2.71
4		$\beta$ Ursæ Minoris ..	5	14 50 30.12	- 0.04	45.56		14 51 15.64	- 6.15
5		9 Ursæ Minoris...	5	14 59 37.96	+ 0.05	45.56		15 0 23.57	- 5.49
6		23 Libræ .....	15	4 28.26	+ 0.48	45.57	45.29	15 5 14.31	- 2.84
7	May 25	Oeltz. Arg. 14246.	5	13 58 33.92	- 0.05	48.16		13 59 22.03	- 5.28
8		B.A.C. 4700 .....	5	14 2 19.54	+ 0.46	48.16		14 3 8.16	- 2.53
9		B.A.C. 4722 .....		14 6 48.98	+ 0.46	48.16		14 7 37.60	- 2.56
10		B.A.C. 4826 .....	5	14 28 6.18	+ 0.25	48.18		14 28 54.61	- 3.51
11		$\pi^3$ Boötis .....		14 33 17.73	+ 0.40	48.18		14 34 6.31	- 2.71
12		$\gamma$ 1 L. ....		14 40 6.32	+ 0.47	48.18		14 42 0.63	
13		$\xi^3$ Libræ .....		14 48 18.35	+ 0.46	48.19	48.05	14 49 7.00	- 2.70
14		20 Libræ .....		14 55 0.29	+ 0.47	48.19	48.14	14 55 48.95	- 2.83
15		$\kappa$ Boötis.....	5	14 59 58.50	+ 0.28	48.20	48.22	15 0 46.98	- 3.29
16		$\iota^1$ Libræ .....	15	3 22.09	+ 0.46	48.20	48.34	15 4 10.75	- 2.81
17		$\delta$ Boötis.....	15	9 1.00	+ 0.36	48.20		15 9 49.56	- 2.93
18		B.A.C. 5064 .....		15 14 17.29	+ 0.26	48.21	48.25	15 15 5.76	- 3.34
19		$\mu$ Boötis .....	5	15 18 22.06	+ 0.34	48.21	48.19	15 19 10.61	- 2.98
20		$\iota$ Draconis .....	5	15 21 1.94	+ 0.19	48.21		15 21 50.34	- 3.78
21	May 27	$\beta^1$ Scorpii.....		15 56 23.32	+ 0.46	50.35	50.40	15 57 14.13	- 2.98
22		$\sigma$ Coronæ .....	5	16 8 33.92	+ 0.33	50.36		16 9 24.61	- 2.89
23		$\psi$ Ophiuchi .....		16 15 0.13	+ 0.47	50.36	50.38	16 15 50.96	- 3.02
24		$\gamma$ 1 L. ....	5	16 24 17.41	} + 0.48	50.37		16 26 16.87	
25		$\gamma$ 2 L. ....		16 26 34.62					
26		B.A.C. 5579 .....		16 32 34.03	+ 0.46	50.38	50.44	16 33 24.87	- 3.01
27		15 Ophiuchi .....		16 35 48.86	+ 0.48	50.38		16 36 39.72	- 3.10
28		* N.P.D. 115° 31'		16 45 1.29	+ 0.48	50.38		16 45 52.15	- 3.16
29		(R) Ophiuchi.....		16 58 49.12	+ 0.46	50.39	50.30	16 59 39.97	- 3.00
30		A <sup>1</sup> Ophiuchi .....		17 5 49.60	+ 0.47	50.40	50.33	17 6 40.47	- 3.20
31		$\theta$ Ophiuchi .....		17 12 29.83	+ 0.47	50.40	50.41	17 13 20.70	- 3.16
32	May 28	$\alpha^3$ Libræ .....		14 42 12.79	+ 0.46	+51.27	+ 51.30	14 43 4.52	- 2.71
May 28. A cloudy night.									
6. Cloudy.					22. Double?				
7—9. Cloudy.					24. — 0.04 has been applied to the transit of				
12. Duration of transit of semi-diameter applied, + 65.66.					1 L. for defective illumination.				
12—14. Unsteady.					29. Dull red.				

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	May 28	$\epsilon^1$ Libræ.....	5	15 3 19.22	+ 0.46	+ 51.28	+ 51.22	15 4 10.96	- 2.82
2		$\epsilon^3$ Libræ.....	5	15 4 25.50	+ 0.46	51.29		15 5 17.25	- 2.82
3		Radcliffe 3522 ...	5	16 5 58.30	- 1.69	51.33	* 51.40	16 6 47.94	- 11.46
4		19 Ursæ Minoris.	5	16 14 10.70	- 0.43	51.34		16 15 1.61	- 5.78
5		Rad. 1311 ... S.P.	5	16 40 54.10	+ 3.64	51.35	* 51.40	4 41 49.09	+ 11.02
6		$\theta$ Ophiuchi .....	17	12 28.86	+ 0.47	51.38	51.40	17 13 20.71	- 3.18
7	June 1	B.A.C. 4773 .....	5	14 16 13.88	+ 0.29	56.15		14 17 10.32	- 2.61
8		$\rho$ Boötis.....		14 24 49.05	+ 0.23	56.15	56.15	14 25 45.43	- 2.83
9		B.A.C. 4923 (1st)	5	14 48 16.34	+ 0.31	56.18		14 49 12.83	- 2.79
10		$\beta$ Boötis .....	6	14 55 42.49	+ 0.21	56.19	56.27	14 56 38.89	- 3.06
11		23 Libræ .....	15	4 17.68	+ 0.31	56.20	56.10	15 5 14.19	- 2.90
12		$\delta$ Boötis.....	15	8 53.12	+ 0.23	56.20		15 9 49.55	- 2.92
13		B.A.C. 5066 .....	15	14 38.53	+ 0.32	56.21		15 15 35.06	- 2.99
14		Oeltz. Arg. 15453.	5	15 26 46.78	+ 0.04	56.22		15 27 43.04	- 3.97
15		42 Libræ .....	6	15 31 0.10	+ 0.31	56.22	56.30	15 31 56.63	- 3.01
16		B.A.C. 5188 .....	15	34 33.90	+ 0.31	56.22		15 35 30.43	- 2.91
17		$\delta$ Scorpii .....	6	15 41 33.41	+ 0.32	56.23	56.16	15 42 29.96	- 3.07
18	June 2	Groom. 595...S.P.	5	14 58 16.60	+ 1.98	57.51	* 57.15	2 59 16.09	+ 9.78
19		Radcliffe 3362 ...	5	15 13 23.90	- 2.01	57.53	* 57.18	15 14 19.42	- 17.33
20		$\zeta^1$ Libræ .....	15	19 20.35	+ 0.28	57.53	57.57	15 20 18.16	- 2.88
21		41 Libræ .....	15	29 49.72	+ 0.27	57.54	57.29	15 30 47.53	- 2.95
22		$\zeta^1$ Cor. Bor. ....	4	15 33 6.68	+ 0.19	57.54		15 34 4.41	- 2.98
23		$\zeta^3$ Cor. Bor. ....	5	15 33 7.06	+ 0.19	57.54	57.76	15 34 4.79	- 2.98
24		$\alpha$ Serpentis .....	15	36 21.60	+ 0.26	57.55	57.55	15 37 19.41	- 2.81
25	June 5	$\pi^3$ Boötis .....		14 34 5.46	+ 0.37	0.67		14 34 6.50	- 2.70
26		$\epsilon$ Boötis.....		14 38 49.00	+ 0.33	0.67	0.65	14 38 50.00	- 2.80
27		Groom. 2213 .....	5	15 6 40.10	- 2.11	0.67	* 0.69	15 6 38.66	- 12.68
28		42 Libræ .....	15	31 55.65	+ 0.47	0.67	0.60	15 31 56.79	- 3.02
29		$\alpha$ Serpentis .....	15	37 18.26	+ 0.40	0.67	0.76	15 37 19.33	- 2.82
30		$\epsilon$ Serpentis.....	15	43 46.03	+ 0.41	0.67		15 43 47.11	- 2.82
31		Groom. 750...S.P.	5	15 53 0.00	+ 3.52	+ 0.67	+ 0.74	3 53 4.19	+ 10.34
June 5. The clock was put one minute forward, and compensation weight No. 3 was substituted for No. 2.									
11. Faint. 13. Faint.					19. Cloudy. 25—31. Cloudy.				

LAMP EAST.								
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	1858.			h. m. s.	s.	s.	s.	h. m. s.
1	June 7	B.A.C. 4828 .....	5	14 29 28.22	+ 0.33	+ 0.95		14 29 29.50
2		B.A.C. 4848 .....		14 34 21.86	+ 0.33	0.95		14 34 23.14
3		R.H.C. 2207 .....	3	14 40 4.42	- 2.04	0.96		14 40 3.34
4		R.H.C. 2206 .....	2	14 40 5.70	- 2.02	0.96		14 40 4.64
5		6 Ursæ Minoris...	5	14 45 12.76	- 0.41	0.96		14 45 13.31
6		B.A.C. 4923 (1st) ..	4	14 49 11.68	+ 0.35	0.96		14 49 12.99
7		B.A.C. 4923 (2d) ..	5	14 49 12.66	+ 0.35	0.96		14 49 13.97
8		B.A.C. 4962 .....		14 57 44.40	+ 0.21	0.96		14 57 45.57
9		♄ <sup>1</sup> Libræ.....	15	4 9.75	+ 0.34	0.96	+ 0.85	15 4 11.05
10		♄ <sup>3</sup> Libræ.....	5	15 5 15.96	+ 0.35	0.96		15 5 17.27
11		♄ Boëtis.....	15	9 48.46	+ 0.18	0.96	1.21	15 9 49.60
12		B.A.C. 5064 .....	5	15 15 4.90	+ 0.06	0.96	0.78	15 15 5.92
13		♄ Serpentiæ ... (S.)	4	15 28 2.85	+ 0.27	0.96		15 28 4.08
14		♄ Serpentiæ ... (N.)	5	15 28 2.88	+ 0.27	0.96	1.03	15 28 4.11
15		R.H.C. 2342 .....	5	15 34 55.90	- 2.15	0.96		15 34 54.71
16		Radcliffe 3475 ...	4	15 49 58.18	- 2.65	0.96	* 1.40	15 49 56.49
17		Groom. 750...S.P.	4	15 52 59.80	+ 3.39	0.96	* 1.35	3 53 4.15
18		13 Scorpii .....	6	16 3 36.15	+ 0.37	0.96		16 3 37.48
19		Antares .....		16 20 44.40	+ 0.37	0.97	0.94	16 20 45.74
20	June 9	♄ <sup>1</sup> Boëtis .....	4	14 44 51.25	+ 0.34	1.26		14 44 52.85
21		♄ <sup>3</sup> Boëtis .....	5	14 44 51.70	+ 0.34	1.26		14 44 53.30
22		B.A.C. 4923 (2d) ..		14 49 12.16	+ 0.51	1.27		14 49 13.94
23		* N.P.D. 99° 50' ..		14 55 12.18	+ 0.48	1.27	1.14	14 55 13.93
24		♄ Boëtis .....		14 58 22.90	+ 0.32	1.27		14 58 24.49
25		♄ <sup>1</sup> Libræ.....	15	4 9.39	+ 0.50	1.27	1.06	15 4 11.16
26		♄ <sup>3</sup> Libræ.....	5	15 5 15.60	+ 0.51	1.27		15 5 17.38
27		Radcliffe 3354 ...	5	15 12 27.20	- 2.85	1.27	* 0.92	15 12 25.62
28		γ Ursæ Minoris...	5	15 21 2.90	- 0.49	1.27		15 21 3.68
29		R.H.C. 505...S.P.	5	15 26 57.70	+ 4.34	1.27		3 27 3.31
30		♄ <sup>1</sup> Coronæ.....	5	15 34 2.92	+ 0.25	1.27		15 34 4.44
31		♄ <sup>3</sup> Coronæ.....	4	15 34 3.30	+ 0.25	1.27	1.45	15 34 4.82
32		χ Herculis .....		15 47 47.53	+ 0.20	1.27	1.36	15 47 49.00
33		Groom. 750...S.P.	5	15 52 59.60	+ 4.35	1.27	* 0.88	3 53 5.22
34		14 Herculis .....		16 5 49.76	+ 0.18	+ 1.27	+ 1.32	16 5 51.21
32, 33. Cloudy.								

LAMP EAST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 10	$\gamma$ Ursæ Minoris...	5	15 0 21.74	-0.41	+1.45		15 0 22.78	-4.92
2		$\iota^1$ Libræ.....		15 4 9.28	+0.32	1.45	+1.34	15 4 11.05	-2.86
3		$\iota^2$ Libræ.....	5	15 5 15.48	+0.32	1.45		15 5 17.25	-2.86
4		Radcliffe 3354 ...	5	15 12 26.00	-2.23	1.46	*1.35	15 12 25.23	-12.04
5		Groom. 2283.....	5	15 25 20.20	-5.94	1.46	*2.37	15 25 15.72	-26.70
6		$\zeta^1$ Coronæ.....	4	15 34 2.70	+0.14	1.46		15 34 4.30	-2.97
7		$\zeta^2$ Coronæ.....	5	15 34 3.36	+0.14	1.46	1.50	15 34 4.96	-2.97
8		$\kappa$ Coronæ .....		15 45 54.29	+0.15	1.46	1.48	15 45 55.90	-2.95
9		Groom. 750...S.P.	5	15 53 0.00	+3.32	1.46	*1.67	3 53 4.78	+9.60
10		$\beta^1$ Scorpïi.....	6	15 57 12.47	+0.32	1.46	1.50	15 57 14.25	-3.09
11		$\delta$ Ophiuchi .....	16	6 55.65	+0.29	1.46	1.48	6 57.40	-2.94
12	June 11	$\theta$ Boötis.....	5	14 20 23.06	+0.11	1.73		14 20 24.90	-3.24
13		R.H.C. 2165 .....	5	14 25 20.40	-2.14	1.73		14 25 19.99	-11.94
14		Radcliffe 756 S.P.	5	14 31 17.70	+3.45	1.73	*1.64	2 31 22.88	+10.22
15		$\mu$ Virginis .....	5	14 35 35.60	+0.37	1.73		14 35 37.70	-2.65
16		54 Hydræ ... (1st)	4	14 37 48.30	+0.41	1.73		14 37 50.44	-2.76
17		54 Hydræ ... (2d)	5	14 37 48.80	+0.41	1.73		14 37 50.94	-2.76
18		58 Hydræ .....		14 41 58.39	+0.43	1.73		14 42 0.55	-2.81
19		* N.P.D. 101° 47'		14 45 10.66	+0.39	1.73		14 45 12.78	-2.72
20		16 Libræ .....		14 49 47.08	+0.37	1.73		14 49 49.18	-2.70
21		* N.P.D. 99° 50'		14 55 11.76	+0.38	1.73	1.66	14 55 13.87	-2.75
22		$\psi$ Boötis .....		14 58 22.50	+0.28	1.73		14 58 24.51	-2.81
23		$\epsilon$ Boötis.....		15 1 4.65	+0.28	1.74		15 1 6.67	-2.80
24		Groom. 2213.....	5	15 6 38.30	-2.09	1.74	*1.62	15 6 37.95	-11.75
25		Radcliffe 3354 ...	5	15 12 25.40	-2.14	1.74	*1.70	15 12 25.00	-11.85
26		R.H.C. 2288 .....	5	15 13 27.70	-2.08	1.74		15 13 27.36	-11.67
27		$\mu$ Boötis .....	5	15 19 8.52	+0.22	1.74	1.84	15 19 10.48	-2.97
28		$\iota$ Draconis .....	5	15 21 48.40	+0.01	1.74		15 21 50.15	-3.59
29		R.H.C. 2333 .....	3	15 30 2.65	-9.16	1.74		15 29 55.23	-39.32
30		B.A.C. 5167 .....	5	15 32 52.18	+0.43	1.74		15 32 54.35	-3.15
31		$\psi$ Serpentis .....		15 36 54.32	+0.35	1.74		15 36 56.41	-2.84
32		2 Scorpïi .....		15 45 6.76	+0.41	1.74		15 45 8.91	-3.13
33		$\chi$ Herculis.....	5	15 47 47.14	+0.18	1.74	+1.78	15 47 49.06	-3.07
34		B.A.C. 5318 .....		15 55 45.43	+0.43	+1.74		15 55 47.60	-3.25
1—5. Cloudy. 10, 11. Cloudy.					30. Scarcely visible. 34. Very faint.				

## LAMP EAST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 11	13 Scorpii .....		16 3 35.03	+ 0.43	+ 1.74		16 3 37.20	- 3.26
2		49 Serpentis (1st) 4		16 6 42.25	+ 0.32	1.74		16 6 44.31	- 2.87
3		49 Serpentis (2d) 5		16 6 42.32	+ 0.32	1.74		16 6 44.38	- 2.87
4		B.A.C. 5453 .....	5	16 13 49.78	- 0.13	1.74	-	16 13 51.39	- 4.00
5		$\psi$ Ophiuchi .....		16 15 48.96	+ 0.41	1.74	+ 1.74	16 15 51.11	- 3.15
6		B.A.C. 5487 .....	6	16 18 38.49	+ 0.43	1.74		16 18 40.66	- 3.36
7		$\tau$ Scorpii .....		16 27 4.18	+ 0.43	1.74	1.69	16 27 6.35	- 3.36
8	June 12	$\pi$ Hydræ .....		13 58 17.86	+ 0.53	1.77		13 58 20.16	- 2.52
9		B.A.C. 4700 .....		14 3 5.80	+ 0.50	1.77		14 3 8.07	- 2.50
10		B.A.C. 4732 .....	5	14 9 29.26	- 0.23	1.77		14 9 30.80	- 4.44
11		4 Ursæ Minoris... 4		14 9 33.16	- 0.79	1.77		14 9 34.14	- 6.32
12		$\beta$ Boötis .....		14 56 36.68	+ 0.27	1.78	1.93	14 56 38.73	- 2.97
13		$\epsilon$ Boötis .....		15 1 4.59	+ 0.36	1.78		15 1 6.73	- 2.79
14		Groom. 2213 .....	5	15 6 37.60	- 2.34	1.78	* 2.41	15 6 37.04	- 11.58
15		Radcliffe 3354 ... 5		15 12 25.20	- 2.38	1.78	* 1.98	15 12 24.60	- 11.68
16		R.H.C. 2288 .....	3	15 13 28.26	- 2.33	1.78		15 13 27.71	- 11.54
17		$\delta$ Ophiuchi .....	5	16 6 55.08	+ 0.45	1.78	1.90	16 6 57.31	- 2.95
18		$\psi$ Ophiuchi .....		16 15 49.05	+ 0.51	1.78	1.57	16 15 51.34	- 3.17
19		$\eta$ Draconis .....	5	16 22 6.28	+ 0.01	1.78		16 22 8.07	- 3.62
20		$\tau$ Scorpii .....		16 27 4.10	+ 0.52	1.78	1.69	16 27 6.40	- 3.37
21		Rad. 1272 ... S.P. 3		16 30 54.37	+ 4.60	1.78	* 2.12	4 31 0.75	+ 10.84
22		(R) Ophiuchi.....		16 59 37.78	+ 0.50	1.78	1.81	16 59 40.06	- 3.21
23	June 14	Radcliffe 3354 ... 5		15 12 24.80	- 2.96	2.12	* 2.67	15 12 23.96	- 11.40
24		R.H.C. 2288 .....	5	15 13 26.90	- 2.90	2.12		15 13 26.12	- 11.23
25		$\mu$ Boötis .....	5	15 19 8.10	+ 0.25	2.12	2.21	15 19 10.47	- 2.95
26		$\delta$ Serpentis ... (S.) 5		15 28 1.58	+ 0.40	2.13		15 28 4.11	- 2.82
27		B.A.C. 5163 .....		15 31 1.05	+ 0.57	2.13		15 31 3.75	- 3.12
28		B.A.C. 5188 .....		15 35 27.93	+ 0.52	2.13		15 35 30.58	- 2.97
29		(R) Coronæ .....		15 42 43.99	+ 0.32	2.13	2.15	15 42 46.44	- 2.88
30		$\theta$ Libræ .....		15 45 45.19	+ 0.52	2.13	2.15	15 45 47.84	- 3.02
31		B.A.C. 5318 .....		15 55 44.99	+ 0.57	2.13		15 55 47.69	- 3.27
32		B.A.C. 5346 .....		15 59 25.22	+ 0.56	2.13	2.04	15 59 27.91	- 3.26
33		14 Herculis .....		16 5 48.74	+ 0.18	+ 2.13	+ 2.31	16 5 51.05	- 3.05
6. Faint.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 14	B.A.C. 5487 .....		16 18 37.98	+ 0.58	+ 2.13		16 18 40.69	- 3.38
2		γ Draconis .....	5	16 22 5.80	- 0.08	2.13		16 22 7.85	- 3.60
3		τ Scorpii .....		16 27 3.76	+ 0.57	2.13	+ 2.00	16 27 6.46	- 3.39
4		Rad. 1272 ... S.P.	3	16 30 53.37	+ 5.42	2.13	* 2.64	4 31 0.92	+ 10.47
5		25 Scorpii .....		16 38 10.82	+ 0.56	2.14	2.05	16 38 13.52	- 3.36
6	June 15	5 Serpentis .....		15 12 4.02	+ 0.48	2.36	2.21	15 12 6.86	- 2.77
7		11 Ursæ Minoris ..	5	15 17 16.96	- 0.45	2.36		15 17 18.87	- 4.71
8		B.A.C. 5163 .....		15 31 0.72	+ 0.57	2.36		15 31 3.65	- 3.11
9		ζ <sup>1</sup> Coronæ .....		15 34 1.70	+ 0.28	2.36		15 34 4.34	- 2.95
10		ψ Serpentis .....		15 36 53.66	+ 0.46	2.36		15 36 56.48	- 2.85
11		χ Herculis .....		15 47 46.34	+ 0.22	2.37	2.51	15 47 48.93	- 3.04
12		τ Scorpii .....		16 27 3.58	+ 0.57	2.37	2.19	16 27 6.52	- 3.40
13		B.A.C. 5595 .....		16 35 6.35	+ 0.56	2.37		16 35 9.28	- 3.39
14		κ Ophiuchi .....		16 50 56.95	+ 0.44	2.38	2.48	16 50 59.77	- 2.94
15		ε Herculis .....		16 54 51.62	+ 0.32	2.38	2.47	16 54 54.32	- 2.91
16		61 Herculis .....		16 58 24.57	+ 0.29	2.38		16 58 27.24	- 2.93
17		B.A.C. 5797 .....	5	17 4 53.48	+ 0.02	2.38		17 4 55.88	- 2.83
18		B.A.C. 5815 .....		17 7 44.45	+ 0.57	2.38		17 7 47.40	- 3.46
19		B.A.C. 5858 .....		17 14 26.98	+ 0.56	2.38		17 14 29.92	- 3.48
20		Rümker 5825 ...		17 18 41.82	+ 0.46	2.38		17 18 44.66	- 3.02
21		ω Draconis .....	5	17 37 48.40	- 0.27	2.38		17 37 50.51	- 3.71
22	June 17	Oeltz. Arg. 15453 ..	5	15 27 39.88	- 0.02	2.83		15 27 42.69	- 3.70
23		κ Libræ .....		15 33 46.05	+ 0.56	2.83	2.66	15 33 49.44	- 3.02
24		(R) Coronæ .....		15 42 43.16	+ 0.38	2.83	2.92	15 42 46.37	- 2.88
25		θ Libræ .....		15 45 44.45	+ 0.55	2.83	2.88	15 45 47.83	- 3.04
26		5 Herculis .....		15 54 51.43	+ 0.42	2.83		15 54 54.68	- 2.85
27		14 Herculis .....		16 5 48.10	+ 0.26	2.83	2.87	16 5 51.19	- 3.05
28		19 Ursæ Minoris ..	5	16 14 59.02	- 0.66	2.83		16 15 1.19	- 5.25
29	June 18	R.H.C. 2333 .....	3	15 29 56.98	- 10.80	2.75		15 29 48.93	- 35.48
30		α Serpentis .....		15 37 16.19	+ 0.49	2.75	2.77	15 37 19.43	- 2.85
31		(R) Coronæ .....		15 42 43.16	+ 0.40	2.75	+ 2.90	15 42 46.31	- 2.88
32		γ Serpentis .....		15 49 53.42	+ 0.47	+ 2.75		15 49 56.64	- 2.85
12. Vivid lightning continuously in the South after this time.					26—28. Cloudy.				

LAMP EAST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 18	5 Herculis .....		15 54 51.10	+ 0.45	+ 2.75		15 54 54.30	- 2.86
2		$\beta^3$ Scorpii .....		15 57 11.50	+ 0.57	2.75	+ 2.59	15 57 14.82	- 3.12
3		Radcliffe 3522 ...	5	16 6 45.60	- 2.17	2.75	* 2.81	16 6 46.18	- 9.68
4		B.A.C. 5465 .....		16 15 46.73	+ 0.60	2.75	2.75	16 15 50.08	- 3.35
5		B.A.C. 5527 .....		16 24 23.39	+ 0.43	2.75		16 24 26.57	- 2.90
6		Rad. 1272 ... S.P.	5	16 30 54.40	+ 4.86	2.75	* 2.87	4 31 2.01	+ 9.90
7	June 21	$\delta$ Serpentis ... (N.)		15 28 0.29	+ 0.33	3.43	3.56	15 28 4.05	- 2.80
8		$\kappa$ Libræ .....		15 33 45.68	+ 0.42	3.43	3.18	15 33 49.53	- 3.03
9		$\alpha$ Serpentis .....		15 37 15.56	+ 0.34	3.43	3.55	15 37 19.33	- 2.85
10		$\epsilon$ Serpentis .....	4	15 43 43.43	+ 0.35	3.43		15 43 47.21	- 2.87
11		$\gamma$ Serpentis .....		15 49 53.09	+ 0.31	3.43		15 49 56.83	- 2.85
12	June 22	5 Serpentis .....		15 12 2.93	+ 0.32	3.53	3.44	15 12 6.78	- 2.75
13		$\eta$ 1 L. ....		15 15 13.23	+ 0.38	3.53		15 16 23.91	
14		$\kappa$ Libræ .....		15 33 45.53	+ 0.36	3.54	3.38	15 33 49.43	- 3.02
15		(R) Coronæ .....		15 42 42.54	+ 0.21	3.54	3.69	15 42 46.29	- 2.86
16		$\delta$ Scorpii .....		15 51 55.75	+ 0.38	3.54	3.64	15 51 59.67	- 3.16
17		51 Libræ (1 & 2)	5	15 56 32.98	+ 0.35	3.54		15 56 36.87	- 3.03
18		51 Libræ ... (3d)	4	15 56 33.58	+ 0.35	3.54		15 56 37.47	- 3.03
19		Radcliffe 3522 ...	4	16 6 43.96	- 2.20	3.54	* 3.97	16 6 45.30	- 9.16
20		20 Ursæ Minoris.	5	16 16 11.28	- 0.66	3.54		16 16 14.16	- 4.86
21		Antares .....		16 20 41.98	+ 0.39	3.54	3.44	16 20 45.91	- 3.36
22		B.A.C. 5527 .....		16 24 22.89	+ 0.24	3.54		16 24 26.67	- 2.91
23		Rad. 1329 ... S.P.	5	16 45 50.20	+ 3.91	3.55	* 4.04	4 45 57.66	+ 7.62
24		$\epsilon$ Herculis .....		16 54 50.59	+ 0.19	3.55	3.65	16 54 54.33	- 2.93
25		$\iota$ Ophiuchi .....		16 57 25.24	+ 0.27	3.55	3.51	16 57 29.06	- 2.97
26	June 23	$\tau^5$ Serpentis .....		15 29 55.35	+ 0.36	3.79		15 29 59.50	- 2.80
27		R.H.C. 2342 .....	3	15 34 50.76	- 2.74	3.79		15 34 51.81	- 9.58
28		(R) Coronæ .....		15 42 42.13	+ 0.30	3.79	4.01	15 42 46.22	- 2.86
29		$\rho$ Scorpii .....		15 48 6.58	+ 0.54	3.79		15 48 10.91	- 3.25
30		$\delta$ Scorpii .....		15 51 55.56	+ 0.51	3.79	3.69	15 51 59.86	- 3.15
31		B.A.C. 5318 .....		15 55 43.15	+ 0.53	3.79		15 55 47.47	- 3.30
32		B.A.C. 5346 .....		15 59 23.62	+ 0.53	+ 3.79	+ 3.69	15 59 27.94	- 3.28

1. Very unsteady.  
4. Faint.

7—11. Cloudy.  
13. Duration of transit of semi-diameter applied, + 66.77.



LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 23	$\delta$ 1 L. ....		16 7 38.79	+ 0.53	+ 3.79		16 8 51.32	
2		$\gamma$ Herculis .....		16 15 38.09	+ 0.34	3.79	+ 3.94	16 15 42.22	- 2.90
3		Antares .....	6	16 20 41.67	+ 0.52	3.79	3.63	16 20 45.98	- 3.37
4	June 24	$\theta$ Draconis .....	5	15 59 13.32	+ 0.01	3.87		15 59 17.20	- 3.34
5		Radcliffe 3522 ...	5	16 6 44.30	- 2.81	3.88	* 3.97	16 6 45.37	- 8.87
6		20 Ursæ Minoris .	5	16 16 11.06	- 0.77	3.88		16 16 14.17	- 4.78
7		Antares .....		16 20 41.38	+ 0.65	3.88	3.79	16 20 45.91	- 3.37
8		B.A.C. 5527 .....		16 24 22.29	+ 0.42	3.88		16 24 26.59	- 2.91
9		R.H.C. 2494 .....	2	16 35 1.27	- 12.62	3.88		16 34 52.53	- 29.00
10		Rad. 1329 ... S.P.	5	16 45 49.20	+ 5.26	3.88	* 4.01	4 45 58.34	+ 7.25
11		$\delta$ 1 L. ....		17 2 5.85	+ 0.66	3.88		17 3 19.62	
12		$\alpha^3$ Herculis .....		17 8 9.41	+ 0.48	3.88	3.97	17 8 13.77	- 2.99
13		$\theta$ Ophiuchi .....		17 13 16.78	+ 0.65	3.88	3.66	17 13 21.31	- 3.54
14		B.A.C. 5895 .....		17 19 30.90	+ 0.31	3.88	3.86	17 19 35.09	- 2.95
15		30 Draconis .....		17 45 39.73	- 0.03	3.88	4.14	17 45 43.58	- 3.02
16	June 25	B.A.C. 5318 .....		15 55 42.96	+ 0.67	3.99		15 55 47.62	- 3.29
17		B.A.C. 5346 .....		15 59 23.24	+ 0.66	3.99		15 59 27.89	- 3.29
18		49 Serpentis (1st)	5	16 6 39.66	+ 0.49	3.99		16 6 44.14	- 2.89
19		49 Serpentis (2d)	4	16 6 39.80	+ 0.49	3.99		16 6 44.28	- 2.89
20		B.A.C. 5487 .....		16 18 36.01	+ 0.67	3.99		16 18 40.67	- 3.43
21		R.H.C. 2463 .....	3	16 23 33.14	- 4.80	3.99		16 23 32.33	- 13.05
22		R.H.C. 2494 .....	3	16 35 2.00	- 12.02	4.00		16 34 53.98	- 28.69
23		R.H.C. 2501 .....	4	16 39 51.28	- 2.63	4.00		16 39 52.65	- 8.45
24		B.A.C. 5709 .....		16 51 15.35	+ 0.65	4.00	3.95	16 51 20.00	- 3.49
25		B.A.C. 5752 .....	5	16 56 44.40	+ 0.09	4.00		16 56 48.49	- 3.24
26		$\mu$ Herculis .....		17 40 52.65	+ 0.41	4.00	4.06	17 40 57.06	- 2.93
27		30 Draconis .....		17 45 39.53	+ 0.19	4.00	4.12	17 45 43.72	- 3.02
28		Groom. 1004 S.P.	3	17 49 1.27	+ 6.73	4.00	4.01	5 49 12.00	+ 8.67
29		$\delta$ 1 L. ....		17 57 38.06	} + 0.67	4.00		17 58 52.14	
30		$\delta$ 2 L. ....		17 59 56.88					
31		12 Sagittarii .....		18 4 24.22	+ 0.64	4.00		18 4 28.86	- 3.63
32		$\delta$ Sagittarii .....		18 11 53.55	+ 0.67	4.00	3.93	18 11 58.22	- 3.85
33		$\lambda$ Sagittarii .....		18 19 11.60	+ 0.65	+ 4.00	+ 3.93	18 19 16.25	- 3.71
1. Duration of transit of semi-diameter applied, + 68 <sup>s</sup> . 21. 2-4. Cloudy. 11. Duration of transit of semi-diameter applied, + 69 <sup>s</sup> . 23.					11. Very hazy. 21. Very faint. 30. + 0 <sup>s</sup> . 19 has been applied to the transit of 2 L. for defective illumination.				

## LAMP EAST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 25	Radcliffe 4069 ...	3	18 39 25.82	-4.97	+4.00	+3.97	18 39 24.85	-9.83
2	June 28	R.H.C. 611... S.P.	5	16 8 27.80	+4.10	+4.19		4 8 36.09	+8.15
3		B.A.C. 5465 .....		16 15 45.43	+0.64	4.19		16 15 50.26	-3.38
4		R.H.C. 2463 .....	5	16 23 31.70	-3.74	4.19		16 23 32.15	-12.33
5		R.H.C. 2494 .....	5	16 34 59.00	-9.59	4.19		16 34 53.60	-27.77
6		B.A.C. 5611 .....	3	16 36 50.11	-0.63	4.19		16 36 53.67	-4.99
7		R.H.C. 2517 .....	3	16 47 9.32	-3.89	4.19		16 47 9.62	-12.41
8		W.B. xvi. 962 ...		16 51 16.63	+0.61	4.19		16 51 21.43	-3.26
9		$\epsilon$ Ophiuchi.....		16 57 24.39	+0.52	4.19		16 57 29.10	-3.00
10		Radcliffe 3685 ...	5	17 6 52.30	-2.44	4.19	* 4.36	17 6 54.05	-8.85
11		$\theta$ Ophiuchi .....		17 13 16.40	+0.63	4.19	4.09	17 13 21.22	-3.57
12		Groom. 956... S.P.	5	17 21 8.10	+3.01	4.19	* 4.32	5 21 15.30	+5.41
13		108 Hercules .....		18 15 27.07	+0.44	4.19	4.47	18 15 31.70	-2.94
14		109 Hercules .....		18 17 37.03	+0.48	4.19	4.29	18 17 41.70	-2.97
15		B.A.C. 6292 .....		18 22 58.15	+0.61	4.19	4.07	18 23 2.95	-3.58
16		1 Aquilæ .....		18 27 27.52	+0.59	4.19	4.02	18 27 32.30	-3.35
17	June 29	49 Serpentis (2d)		16 6 39.84	+0.43	4.30		16 6 44.57	-2.88
18		$\sigma$ Coronæ .....	5	16 9 20.08	+0.33	4.30		16 9 24.71	-2.89
19		$\gamma$ Hercules .....		16 15 37.70	+0.41	4.30	4.26	16 15 42.41	-2.90
20		B.A.C. 5527 .....		16 24 22.10	+0.39	4.30		16 24 26.79	-2.91
21		B.A.C. 5611 .....	5	16 36 50.00	-0.76	4.30		16 36 53.54	-4.94
22		$\epsilon$ Scorpii .....		16 40 57.59	+0.58	4.30		16 41 2.47	-3.70
23		$\epsilon$ Ophiuchi.....		16 57 24.33	+0.43	4.30	4.29	16 57 29.06	-3.00
24		63 Hercules .....		17 5 8.74	+0.39	4.30		17 5 13.43	-2.96
25		$\alpha^1$ Hercules .....		17 8 8.60	+0.43	4.30	4.45	17 8 13.33	-3.01
26		$\xi$ Ophiuchi .....		17 12 28.53	+0.54	4.30	4.28	17 12 33.37	-3.50
27		B.A.C. 5858 .....	5	17 14 25.12	+0.55	4.30		17 14 29.97	-3.59
28		$\delta$ Ophiuchi.....		17 17 40.99	+0.55	4.30	4.23	17 17 45.84	-3.58
29	June 30	Radcliffe 3522 ...	5	16 6 42.30	-2.44	4.24	* 4.73	16 6 44.10	-7.98
30		20 Ursæ Minoris.	5	16 16 9.92	-0.72	4.24		16 16 13.44	-4.48
31		B.A.C. 5527 .....		16 24 22.00	+0.30	4.24		16 24 26.54	-2.91
32		B.A.C. 5595 .....		16 35 4.68	+0.48	+4.24	+4.01	16 35 9.40	-3.47

14. Unsteady.

LAMP EAST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	June 30	R.H.C. 2501 .....	3	16 39 50.59	- 2.44	+ 4.24		16 39 52.39	- 7.83
2		R.H.C. 704...S.P.	5	16 45 50.50	+ 4.42	4.24	+ * 4.69	4 45 59.16	+ 6.03
3		B.A.C. 5752 .....	5	16 56 44.18	- 0.02	4.24		16 56 48.40	- 3.17
4		63 Hercules .....		17 5 8.79	+ 0.29	4.24		17 5 13.32	- 2.96
5		$\alpha^1$ Hercules .....		17 8 8.82	+ 0.33	4.24	4.33	17 8 13.39	- 3.01
6		$\xi$ Ophiuchi.....		17 12 28.65	+ 0.45	4.24	4.25	17 12 33.34	- 3.50
7		$\delta$ Ophiuchi.....		17 17 41.08	+ 0.47	4.24	4.22	17 17 45.79	- 3.58
8		B.A.C. 6712 .....	5	19 28 44.80	- 0.04	4.24		19 28 49.00	- 2.83
9		(R) Cygni .....		19 32 58.55	+ 0.12	4.24	4.41	19 33 2.91	- 2.76
				.					
10	July 1	B.A.C. 5595 .....		16 35 4.77	+ 0.47	4.27		16 35 9.51	- 3.47
11		15 Ophiuchi .....		16 36 35.36	+ 0.46	4.27		16 36 40.09	- 3.40
12		$\kappa$ Ophiuchi .....		16 50 55.32	+ 0.35	4.27	4.26	16 50 59.94	- 3.00
13		B.A.C. 5752 .....	5	16 56 44.12	0.00	4.27		16 56 48.39	- 3.16
14		61 Hercules .....		16 58 22.64	+ 0.23	4.27	4.53	16 58 27.14	- 2.93
15		63 Hercules .....		17 5 8.81	+ 0.29	4.27		17 5 13.37	- 2.95
16		$\alpha^2$ Hercules .....		17 8 9.19	+ 0.34	4.27	4.35	17 8 13.80	- 3.01
17		$\xi$ Ophiuchi.....		17 12 28.88	+ 0.45	4.27	4.03	17 12 33.60	- 3.51
18		72 Hercules .....	5	17 15 19.42	+ 0.25	4.27		17 15 23.94	- 2.96
19		$\delta$ Ophiuchi.....		17 17 41.13	+ 0.46	4.27	4.19	17 17 45.86	- 3.59
20		$\epsilon$ Hercules .....		17 35 25.76	+ 0.15	4.27		17 35 30.18	- 2.99
21	July 13	Radcliffe 3798 ...	5	17 48 11.90	- 3.31	3.55	* 3.07	17 48 12.14	- 9.49
22		Groom. 1004. S.P.	5	17 49 8.40	+ 4.10	3.55	* 3.17	5 49 16.05	+ 4.93
23		70 Ophiuchi (1st)	5	17 58 16.10	+ 0.42	3.55	3.51	17 58 20.07	- 3.25
24		70 Ophiuchi (2d)	4	17 58 16.45	+ 0.42	3.55		17 58 20.42	- 3.25
25		B.A.C. 6184 .....	5	18 7 29.72	+ 0.18	3.55		18 7 33.45	- 2.99
26		$\eta$ Serpentis .....		18 13 57.13	+ 0.43	3.55	3.57	18 14 1.11	- 3.36
27		B.A.C. 6245 .....		18 16 31.73	+ 0.38	3.55	3.68	18 16 35.66	- 3.09
28		B.A.C. 6292 .....		18 22 59.19	+ 0.44	3.55	3.35	18 23 3.18	- 3.73
29		$\alpha$ Aquilæ .....		19 43 50.63	+ 0.21	3.55	3.65	19 43 54.39	- 3.23
30	July 14	$\alpha^1$ Hercules .....		17 8 9.35	+ 0.47	3.61	3.65	17 8 13.43	- 3.00
31		Groom. 956...S.P.	5	17 21 11.30	+ 2.78	3.61	+ * 4.19	5 21 17.69	+ 2.63
32		3 Sagittarii .....		17 38 37.34	+ 0.57	+ 3.61		17 38 41.52	- 3.83
17. Cloudy.									

## LAMP EAST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	July 14	$\alpha$ Aquilæ .....	1	18 27 28.29	+ 0.53	+ 3.62	+ 3.46	18 27 32.44	- 3.50
2		B.A.C. 6347 .....	3	18 30 25.08	+ 0.55	3.62	3.70	18 30 29.25	- 3.81
3		$\epsilon^1$ Lyre ..... (1st)	4	18 39 36.79	+ 0.34	3.62		18 39 40.75	- 2.94
4		$\epsilon^1$ Lyre ..... (2d)	5	18 39 37.04	+ 0.34	3.62		18 39 41.00	- 2.94
5		$\beta^1$ Lyre .....	5	18 44 49.26	+ 0.38	3.62	3.59	18 44 53.26	- 2.98
6		$\gamma$ Lyre .....		18 53 36.88	+ 0.38	3.62	3.73	18 53 40.88	- 2.99
7		R.H.C. 2882 .....	5	19 0 48.80	- 3.62	3.62	* 4.13	19 0 48.80	- 7.72
8		$\delta$ Sagittarii .....		19 9 19.26	+ 0.56	3.62		19 9 23.44	- 3.81
9		$\zeta$ Aquilæ .....		19 12 57.35	+ 0.52	3.62	3.60	19 13 1.49	- 3.49
10		B.A.C. 6652 .....		19 19 10.06	+ 0.44	3.62	3.61	19 19 14.12	- 3.09
11		$\beta^2$ Cygni .....		19 25 0.95	+ 0.41	3.62		19 25 4.98	- 3.02
12		B.A.C. 6712 .....	5	19 28 45.42	+ 0.15	3.62		19 28 49.19	- 2.92
13		(R) Cygni .....		19 32 59.35	+ 0.26	3.62	3.61	19 33 3.23	- 2.90
14		B.A.C. 6773 .....		19 39 37.26	+ 0.56	3.62		19 39 41.44	- 3.69
15	July 17	B.A.C. 5858 .....		17 14 25.17	+ 0.33	4.37		17 14 29.87	- 3.64
16		Rümker 5825 ...		17 18 40.12	+ 0.26	4.37		17 18 44.75	- 3.16
17		$\omega$ Draconis .....	5	17 37 46.06	- 0.32	4.37		17 37 50.11	- 3.16
18		Radcliffe 3796 ...	5	17 47 38.20	- 4.48	4.37	* 3.72	17 47 38.09	- 8.54
19		Radcliffe 3798 ...	5	17 48 11.00	- 4.49	4.37	* 4.08	17 48 10.88	- 8.56
20		$\gamma$ Ophiuchi (1st)		17 58 15.23	+ 0.26	4.37	4.55	17 58 19.86	- 3.26
21		$\eta$ Sagittarii .....		18 4 24.36	+ 0.32	4.38		18 4 29.06	- 3.88
22		B.A.C. 6184 .....	5	18 7 29.18	- 0.05	4.38		18 7 33.51	- 2.94
23		B.A.C. 6201 (1st)		18 10 22.00	+ 0.31	4.38		18 10 26.69	- 3.69
24		$\epsilon$ Sagittarii .....		18 14 44.46	+ 0.35	4.38		18 14 49.19	- 4.24
25		$\delta$ Draconis .....	5	18 17 47.90	- 0.32	4.38		18 17 51.96	- 3.16
26		B.A.C. 6292 .....		18 22 58.58	+ 0.31	4.38	4.10	18 23 3.27	- 3.74
27		$\alpha$ Aquilæ .....		18 27 27.70	+ 0.28	4.38	4.30	18 27 32.36	- 3.50
28		$\gamma^1$ Cep. (Hev.) S.P.	3	18 32 24.14	+ 5.70	4.38	* 3.88	6 32 34.22	+ 5.01
29		$\epsilon^1$ Lyre ..... (1st)	5	18 39 36.36	+ 0.10	4.38		18 39 40.84	- 2.95
30		$\epsilon^1$ Lyre ..... (2d)	4	18 39 36.54	+ 0.10	4.38		18 39 41.02	- 2.95
31		$\beta^1$ Lyre .....	5	18 44 48.68	+ 0.13	4.38	4.42	18 44 53.19	- 2.98
32		$\beta^2$ Lyre .....	4	18 44 50.50	+ 0.13	4.38	4.55	18 44 55.01	- 2.98
33	July 19	$\epsilon$ Herculis .....		17 35 25.26	+ 0.05	+ 4.90	+ 5.00	17 35 30.21	- 2.86
2—6. Cloudy.									

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	July 19	87 Herculis .....		17 43 1'59	+ 0'17	+ 4'90	+ 4'92	17 43 6'66	- 2'97
2		B.A.C. 6065 .....		17 48 7'51	+ 0'29	4'90	4'78	17 48 12'70	- 3'56
3		5 Sagittarii .....		17 51 27'96	+ 0'30	4'90	4'91	17 51 33'16	- 3'79
4		R.H.C. 2693 .....	5	17 56 21'10	- 2'09	4'90		17 56 23'91	- 5'26
5		R.H.C. 889... S.P.	3	18 7 5'54	+ 3'91	4'90		6 7 14'35	+ 2'53
6		B.A.C. 6201 (1st).		18 10 21'54	+ 0'29	4'90		18 10 26'73	- 3'69
7		Radcliffe 3921 ...	5	18 17 28'00	- 2'88	4'90	* 4'11	18 17 30'02	- 6'25
8		B.A.C. 6304 .....		18 24 32'37	+ 0'31	4'90		18 24 37'58	- 3'92
9		25 Sagittarii .....		18 25 50'39	+ 0'30	4'90	4'82	18 25 55'59	- 3'92
10		51 Cep. (Hev.) S.P.	3	18 32 24'98	+ 5'43	4'90	* 4'10	6 32 35'31	+ 4'26
11		$\epsilon^1$ Lyrae ..... (1st)	4	18 39 35'89	+ 0'10	4'90		18 39 40'89	- 2'95
12		$\epsilon^1$ Lyrae ..... (2d)	5	18 39 36'04	+ 0'10	4'90		18 39 41'04	- 2'95
13		$\beta^3$ Lyrae .....		18 44 50'08	+ 0'13	4'90	4'98	18 44 55'11	- 2'99
14	July 21	63 Ophiuchi .....		17 46 8'25	+ 0'57	4'90	4'81	17 46 13'72	- 3'78
15		5 Sagittarii .....		17 51 27'85	+ 0'56	4'90	4'76	17 51 33'31	- 3'79
16		12 Sagittarii .....		18 4 23'63	+ 0'56	4'90		18 4 29'09	- 3'90
17		B.A.C. 6201 (2d)		18 10 22'46	+ 0'54	4'90		18 10 27'90	- 3'71
18		7 Serpentis .....		18 13 55'72	+ 0'52	4'90	4'93	18 14 1'14	- 3'40
19		24 Ursa Minoris ..	5	18 23 27'00	- 4'26	4'90	* 4'64	18 23 27'64	- 7'51
20		51 Cep. (Hev.) S.P.	4	18 32 24'17	+ 5'94	4'90	* 4'67	6 32 35'01	+ 3'95
21		$\beta^3$ Lyrae .....		18 44 49'82	+ 0'38	4'90	4'99	18 44 55'10	- 2'99
22		B.A.C. 6562 .....		19 4 27'56	+ 0'57	4'90		19 4 33'03	- 4'09
23		$\delta$ Sagittarii .....		19 9 17'92	+ 0'56	4'90		19 9 23'38	- 3'87
24		$\delta$ Aquilae .....		19 18 18'15	+ 0'50	4'90	4'99	19 18 23'55	- 3'39
25	July 26	$\epsilon$ Herculis .....		17 35 24'70	+ 0'27	5'07	5'25	17 35 30'04	- 2'77
26		87 Herculis .....		17 43 1'16	+ 0'42	5'07	5'06	17 43 6'65	- 2'93
27		Groom. 1004 S.P.	3	17 49 8'17	+ 6'35	5'07	* 4'94	5 49 19'59	+ 1'11
28		R.H.C. 2693 .....	5	17 56 19'80	- 2'59	5'07		17 56 22'28	- 4'11
29		Radcliffe 4069 ...	4	18 39 20'35	- 4'65	5'07	* 5'01	18 39 20'77	- 5'63
30		$\psi$ Sagittarii .....		19 6 48'15	+ 0'64	5'07	5'28	19 6 53'86	- 4'10
31		$\delta$ Aquilae .....		19 18 18'12	+ 0'54	5'07	5'00	19 18 23'73	- 3'41
32		$\beta^3$ Cygni .....		19 24 59'52	+ 0'41	5'07		19 25 5'00	- 3'07
33		B.A.C. 6746 .....		19 35 25'92	+ 0'60	+ 5'07	+ 4'74	19 35 31'59	- 3'83
July 26. Cloudy all night.									

## LAMP EAST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	July 28	$\alpha^1$ Herculis .....		17 8 7.83	+ 0.40	+ 5.17	+ 5.16	17 8 13.40	- 2.92
2		B.A.C. 5853 .....		17 13 9.29	+ 0.23	5.17		17 13 14.69	- 2.68
3		B.A.C. 5873 .....		17 17 10.13	+ 0.47	5.17		17 17 15.77	- 3.69
4		B.A.C. 5896 .....		17 19 51.27	+ 0.47	5.17		17 19 56.91	- 3.64
5		$\epsilon$ Herculis .....		17 35 24.70	+ 0.28	5.17	5.21	17 35 30.15	- 2.74
6		$\gamma$ Sagittarii .....		17 38 36.01	+ 0.47	5.17		17 38 41.65	- 3.82
7		$\psi^1$ Draconis (2d) 5		17 44 28.18	- 0.19	5.17		17 44 33.16	- 2.82
8		B.A.C. 6065 .....		17 48 7.09	+ 0.46	5.17	5.02	17 48 12.72	- 3.55
9		R.H.C. 2693 .....	5	17 56 19.20	- 1.56	5.17		17 56 22.81	- 3.79
10		B.A.C. 6185 .....	5	18 7 34.30	+ 0.21	5.17		18 7 39.68	- 2.77
11		$\alpha$ Draconis .....	5	18 10 38.30	- 0.65	5.17		18 10 42.82	- 3.24
12		$\alpha$ Draconis .....	5	18 10 44.40	- 0.67	5.17		18 10 48.90	- 3.24
13		$\delta$ Ursæ Minoris... 3		18 18 12.48	- 2.99	5.17	* 5.10	18 18 14.66	- 5.11
14		51 Cep. (Hev.) S.P. 5		18 32 27.00	+ 4.87	5.17	* 5.03	6 32 37.04	+ 1.65
15		$\beta^1$ Lyrae .....		18 44 49.68	+ 0.33	5.17	5.16	18 44 55.18	- 2.97
16		13 Lyrae.....		18 50 58.15	+ 0.28	5.17	5.29	18 51 3.60	- 2.89
17		(R) Aquilæ .....		18 59 29.50	+ 0.44	5.17		18 59 35.11	- 3.30
18	July 29	$\epsilon$ Herculis .....		17 35 24.60	+ 0.39	4.99	5.17	17 35 29.98	- 2.71
19		63 Ophiuchi .....		17 46 8.13	+ 0.57	4.99	4.92	17 46 13.69	- 3.77
20		$\xi$ Herculis .....		17 52 12.03	+ 0.47	4.99		17 52 17.49	- 2.90
21		R.H.C. 2693 .....	5	17 56 18.70	- 1.40	4.99		17 56 22.29	- 3.63
22		R.H.C. 2698 .....	5	17 57 48.40	- 1.41	4.99		17 57 51.98	- 3.65
23		B.A.C. 6185 .....	5	18 7 34.14	+ 0.32	4.99		18 7 39.45	- 2.75
24		B.A.C. 6201 (2d) 5		18 10 22.08	+ 0.55	4.99		18 10 27.62	- 3.71
25		B.A.C. 6218 .....	5	18 12 33.96	+ 0.41	4.99		18 12 39.36	- 2.84
26		24 Ursæ Minoris. 3		18 23 23.74	- 3.23	4.99	* 4.66	18 23 25.50	- 5.21
27		51 Cep. (Hev.) S.P. 3		18 32 27.64	+ 4.86	4.99	* 4.72	6 32 37.49	+ 1.37
28		$\beta^1$ Lyrae .....		18 44 49.56	+ 0.44	4.99	5.15	18 44 54.99	- 2.95
29		13 Lyrae.....		18 50 58.25	+ 0.39	4.99	5.08	18 51 3.63	- 2.89
30		B.A.C. 6505 .....		18 56 1.29	+ 0.47	4.99		18 56 6.75	- 4.07
31		(R) Aquilæ .....		18 59 29.70	+ 0.55	4.99		18 59 35.24	- 3.30
32		$\psi$ Sagittarii .....		19 6 48.63	+ 0.57	4.99	4.87	19 6 54.19	- 4.10
33		$\delta$ Draconis..... 5		19 12 28.52	+ 0.12	4.99		19 12 33.63	- 2.90
34		(R) Cygni .....		19 32 58.13	+ 0.35	+ 4.99	+ 4.75	19 33 3.47	- 2.91
11—14. Cloudy. 17. Dull red.				31. Deep red.					

LAMP EAST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	July 30	B.A.C. 6012 .....		17 38 57.38	+ 0.48	+ 5.15		17 39 3.01	- 3.12
2		B.A.C. 6059 .....		17 47 30.82	+ 0.60	5.15		17 47 36.57	- 3.82
3		ξ Herculis .....		17 52 12.14	+ 0.37	5.15	+ 5.27	17 52 17.66	- 2.88
4		R.H.C. 2693 .....	5	17 56 18.90	- 2.46	5.15		17 56 21.59	- 3.47
5		R.H.C. 2698 .....	5	17 57 48.20	- 2.48	5.15		17 57 50.87	- 3.48
6		R.H.C. 889... S.P.	5	18 7 8.60	+ 5.07	5.16		6 7 18.83	- 0.22
7		B.A.C. 6218 .....	5	18 12 33.92	+ 0.29	5.16		18 12 39.37	- 2.82
8		R.H.C. 920... S.P.	5	18 18 15.80	+ 5.02	5.16		6 18 25.98	- 0.12
9		B.A.C. 6304 .....		18 24 32.03	+ 0.58	5.16		18 24 37.77	- 3.93
10		ε <sup>1</sup> Lyrae ..... (1st)	5	18 39 35.38	+ 0.39	5.16		18 39 40.84	- 2.89
11		ε <sup>1</sup> Lyrae ..... (2d)	4	18 39 35.54	+ 0.30	5.16		18 39 41.00	- 2.89
12		ν <sup>1</sup> Lyrae .....		18 44 26.23	+ 0.35	5.16	5.23	18 44 31.74	- 2.96
13		13 Lyrae .....		18 50 58.26	+ 0.26	5.16	5.18	18 51 3.68	- 2.87
14		B.A.C. 6505 .....		18 56 1.23	+ 0.39	5.16		18 56 6.78	- 4.06
15		ζ Aquilæ .....		18 58 50.75	+ 0.45	5.16	5.02	18 58 56.36	- 3.21
16		α Aquilæ .....		19 43 49.05	+ 0.47	5.17	5.11	19 43 54.69	- 3.37
17		ω Sagittarii .....		19 47 6.89	+ 0.60	5.17		19 47 12.66	- 4.22
18		R.H.C. 1153. S.P.	3	19 51 17.74	+ 3.75	5.17	* 4.87	7 51 26.66	- 0.07
19		Radcliffe 4721 ...	5	20 11 8.90	- 3.27	5.17	* 4.87	20 11 10.80	- 4.89
20		B.A.C. 7009 .....		20 15 27.93	+ 0.56	5.17		20 15 33.66	- 3.86
21	Aug. 3	40 Draconis .....	5	18 10 37.04	- 0.87	5.60		18 10 41.77	- 2.68
22		41 Draconis .....	5	18 10 43.54	- 0.88	5.60		18 10 48.26	- 2.68
23		108 Herculis .....		18 15 25.97	+ 0.32	5.60	5.65	18 15 31.89	- 2.90
24		24 Ursæ Minoris .....	5	18 23 21.80	- 4.11	5.60	* 5.92	18 23 23.29	- 3.78
25		51 Cep. (Hev.) S.P.	5	18 32 27.70	+ 5.61	5.60	* 5.83	6 32 38.91	- 0.37
26		B.A.C. 6396 .....		18 40 42.83	+ 0.49	5.60		18 40 48.92	- 4.08
27		ν <sup>1</sup> Lyrae .....		18 44 25.89	+ 0.33	5.60	5.57	18 44 31.82	- 2.94
28		13 Lyrae .....		18 50 57.82	+ 0.25	5.60	5.60	18 51 3.67	- 2.84
29		ζ Aquilæ .....		18 58 50.19	+ 0.39	5.60	5.63	18 58 56.18	- 3.20
30		B.A.C. 6562 .....		19 4 26.86	+ 0.49	5.60		19 4 32.95	- 4.13
31		δ Sagittarii .....		19 9 17.46	+ 0.48	5.60		19 9 23.54	- 3.92
32		(R) Cygni .....		19 32 57.45	+ 0.20	5.60	5.55	19 33 3.25	- 2.88
33	Aug. 5	ζ Serpentis .....		17 52 55.88	+ 0.51	+ 5.88	+ 5.91	17 53 2.27	- 3.29
26. Faint.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Aug. 5	R.H.C. 2698 .....	2	17 57 47.46	- 1.79	+ 5.88		17 57 51.55	- 2.37
2		R.H.C. 897... S.P.	3	18 11 28.29	+ 6.12	5.88		6 11 40.29	- 1.59
3		42 Draconis .....	5	18 25 31.10	+ 0.06	5.89		18 25 37.05	- 2.59
4		$\epsilon^2$ Lyrae .....	4	18 39 36.69	+ 0.34	5.89		18 39 42.92	- 2.84
5		$\epsilon^2$ Lyrae .....	5	18 39 37.02	+ 0.34	5.89		18 39 43.25	- 2.84
6		$\nu^3$ Lyrae .....		18 44 31.49	+ 0.38	5.89	+ 5.92	18 44 37.76	- 2.93
7		13 Lyrae .....		18 50 57.46	+ 0.32	5.89	5.87	18 51 3.67	- 2.82
8		16 Lyrae .....	5	18 57 21.94	+ 0.30	5.89		18 57 28.13	- 2.82
9		B.A.C. 6542 .....		19 0 40.00	+ 0.42	5.89		19 0 46.31	- 3.05
10		$\omega$ Aquilae .....		19 11 6.03	+ 0.46	5.89	5.76	19 11 12.38	- 3.26
11		Rad. 2020 ... S.P.	5	19 38 2.70	+ 4.06	5.90	* 5.42	7 38 12.66	- 0.28
12		R.H.C. 2990 .....	3	19 45 10.12	- 2.61	5.90	* 5.32	19 45 13.41	- 4.19
13		$\gamma$ Sagittarii .....		19 49 51.09	+ 0.53	5.90	6.00	19 49 57.52	- 3.91
14	Aug. 6	B.A.C. 6185 .....	5	18 7 33.34	+ 0.11	6.15		18 7 39.60	- 2.59
15		R.H.C. 897... S.P.	5	18 11 30.60	+ 6.01	6.15		6 11 42.76	- 2.11
16		B.A.C. 6288 .....	5	18 21 15.20	- 0.27	6.15		18 21 21.08	- 2.50
17		51 Cep. (Hev.) S.P.	5	18 32 28.70	+ 5.40	6.16	* 5.96	6 32 40.26	- 1.44
18		B.A.C. 6542 .....		19 0 39.90	+ 0.29	6.16		19 0 46.35	- 3.05
19		$\omega$ Aquilae .....		19 11 5.82	+ 0.34	6.16	6.08	19 11 12.32	- 3.25
20		$\delta$ Aquilae .....		19 18 17.09	+ 0.36	6.16	6.23	19 18 23.61	- 3.43
21		$\alpha$ Vulpeculae .....		19 22 44.38	+ 0.29	6.16		19 22 50.83	- 3.11
22		$\iota^3$ Cygni .....		19 26 3.96	+ 0.13	6.16	6.21	19 26 10.25	- 2.83
23		42 Aquilae .....		19 30 12.26	+ 0.38	6.16	6.18	19 30 18.80	- 3.61
24		B.A.C. 6741 .....		19 33 56.66	+ 0.16	6.16	6.23	19 34 2.98	- 2.87
25		16 Cygni .....	(2d)	19 38 1.92	+ 0.14	6.16	5.93	19 38 8.22	- 2.86
26		25 Cygni .....		19 54 39.26	+ 0.23	6.16		19 54 45.65	- 3.01
27		B.A.C. 6907 .....		20 0 25.70	+ 0.40	6.16		20 0 32.26	- 3.91
28		Rümker 8047 ...		20 3 12.25	+ 0.35	6.16		20 3 18.76	- 3.41
29		Radcliffe 4721 ...	5	20 11 6.40	- 2.54	6.16	* 5.98	20 11 10.02	- 4.28
30	Aug. 7	B.A.C. 6184 .....	5	18 7 26.72	+ 0.08	6.13		18 7 32.93	- 2.54
31		$\delta$ Sagittarii .....		18 11 51.75	+ 0.56	6.13		18 11 58.44	- 4.02
32		$\epsilon$ Sagittarii .....		18 14 42.77	+ 0.59	6.13		18 14 49.49	- 4.20
33		$\lambda$ Sagittarii .....		18 19 9.79	+ 0.55	+ 6.13	+ 6.04	18 19 16.47	- 3.91



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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Aug. 7	B.A.C. 6292 .....		18 22 56.55	+ 0.53	+ 6.13	+ 5.90	18 23 3.21	- 3.73
2		1 Aquilæ .....		18 27 25.66	+ 0.50	6.13	6.13	18 27 32.29	- 3.51
3		ε <sup>3</sup> Lyrae..... (1st)	5	18 39 36.72	+ 0.26	6.13		18 39 43.11	- 2.82
4		ν <sup>3</sup> Lyrae.....		18 44 31.13	+ 0.31	6.13	6.33	18 44 37.57	- 2.91
5		γ Lyrae .....		18 53 34.35	+ 0.31	6.13	6.27	18 53 40.79	- 2.93
6		16 Lyrae.....		18 57 21.44	+ 0.20	6.13		18 57 27.77	- 2.79
7		B.A.C. 6542 .....		19 0 39.53	+ 0.36	6.13		19 0 46.02	- 3.05
8		Rad. 1979. ... S.P.	5	19 29 46.60	+ 5.88	6.13	* 5.87	7 29 58.61	- 0.65
9		R.H.C. 2989 .....	5	19 43 24.40	- 3.55	6.13	* 5.92	19 43 26.98	- 3.79
10		ξ <sup>3</sup> Capricorni ...		20 4 28.32	+ 0.51	6.13		20 4 34.96	- 3.86
11		α <sup>3</sup> Capricorni.....		20 10 7.65	+ 0.51	6.13	6.09	20 10 14.29	- 3.86
12	Aug. 9	24 Ursæ Minoris .	5	18 23 18.90	- 4.45	6.57	* 7.11	18 23 21.02	- 1.56
13		B.A.C. 6347 .....		18 30 22.20	+ 0.62	6.57	6.53	18 30 29.39	- 3.83
14		ε <sup>3</sup> Lyrae..... (1st)	5	18 39 36.12	+ 0.40	6.57		18 39 43.09	- 2.79
15		ε <sup>3</sup> Lyrae..... (2d)	4	18 39 36.44	+ 0.40	6.57		18 39 43.41	- 2.79
16		ζ Sagittarii .....		18 53 31.78	+ 0.65	6.57		18 53 39.00	- 4.23
17		τ Sagittarii .....		18 58 1.53	+ 0.65	6.57		18 58 8.75	- 4.17
18		B.A.C. 6562 .....		19 4 26.08	+ 0.64	6.57		19 4 33.29	- 4.13
19		* N.P.D. 70° 48'.		19 9 10.76	+ 0.50	6.57		19 9 17.83	- 3.13
20		Rad. 1979 ... S.P.	5	19 29 46.30	+ 5.39	6.58	* 7.15	7 29 58.27	- 1.19
21		16 Cygni ... (2d)		19 38 1.04	+ 0.31	6.58	6.60	19 38 7.93	- 2.82
22		δ Sagittæ .....		19 40 59.51	+ 0.51	6.58		19 41 6.60	- 3.21
23		α Aquilæ .....		19 43 47.36	+ 0.54	6.58	6.75	19 43 54.48	- 3.39
24		58 Aquilæ .....		19 47 24.38	+ 0.57	6.58		19 47 31.53	- 3.54
25		Oeltz. Arg. 20562.		20 22 42.98	+ 0.62	6.59	6.44	20 22 50.19	- 3.98
26		η Cephei .....	5	20 42 20.04	+ 0.15	6.59		20 42 26.78	- 2.94
27		32 Vulpeculæ ...		20 48 26.75	+ 0.47	6.59	6.60	20 48 33.81	- 3.18
28	Aug. 13	24 Ursæ Minoris .	3	18 23 17.17	- 4.11	7.75	* 7.03	18 23 20.81	- 0.22
29		B.A.C. 6347 .....		18 30 21.20	+ 0.34	7.75	7.78	18 30 29.29	- 3.80
30		ε <sup>3</sup> Lyrae..... (2d)		18 39 35.36	+ 0.16	7.76		18 39 43.28	- 2.74
31		16 Lyrae.....		18 57 20.03	+ 0.10	7.76		18 57 27.89	- 2.71
32		B.A.C. 6563 .....	5	19 3 47.88	- 0.62	7.76		19 3 55.02	- 2.29
33		ω Aquilæ .....		19 11 4.33	+ 0.27	+ 7.76	+ 7.62	19 11 12.36	- 3.23
24. Observed by mistake for ξ Aquilæ.					32, 33. Cloudy.				

LAMP EAST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Aug. 13	♂ Aquilæ .....	4	19 18 15.76	+ 0.29	+ 7.76	+ 7.61	19 18 23.81	— 3.41
2		♂ Cygni.....		19 26 2.29	+ 0.06	7.76	7.85	19 26 10.11	— 2.73
3		σ Draconis .....	5	19 32 32.70	— 0.26	7.76		19 32 40.20	— 2.58
4		Rad. 2020 ... S.P.	4	19 38 2.96	+ 3.89	7.76	* 6.95	7 38 14.61	— 1.91
5		58 Aquilæ .....		19 47 23.73	+ 0.31	7.76	7.93	19 47 31.80	— 3.54
				LAMP	WEST.				
6	Aug. 19	♂ L. ....		18 14 13.86	+ 0.49	8.22		18 15 32.31	
7		α Lyre .....		18 32 1.97	+ 0.49	8.23	8.03	18 32 10.69	— 2.65
8		φ Sagittari .....		18 36 42.30	+ 0.49	8.23	8.17	18 36 51.02	— 3.98
9		111 Herculis .....		18 40 39.35	+ 0.48	8.23		18 40 48.06	— 2.99
10		R.H.C. 288a .....	4	19 0 31.65	+ 1.79	8.23	* 7.90	19 0 41.67	+ 0.19
11		Groom. 1119 S.P.	3	19 7 42.30	— 4.54	8.23	* 6.64	7 7 45.99	— 10.63
12		B.A.C. 6652 .....		19 19 5.24	+ 0.48	8.23	8.38	19 19 13.95	— 3.08
13		♂ Cygni.....		19 26 1.31	+ 0.53	8.23	8.26	19 26 10.07	— 2.63
14		Rad. 2020 ... S.P.	5	19 38 8.20	— 0.84	8.23	* 7.85	7 38 15.59	— 3.33
15		R.H.C. 2990 .....	3	19 45 1.55	+ 1.54	8.23	* 7.27	19 45 11.32	— 1.70
16		25 Cygni .....		19 54 37.01	+ 0.50	8.23		19 54 45.74	— 2.93
17		B.A.C. 7083 .....		20 25 12.02	+ 0.52	8.24		20 25 20.78	— 2.92
18		κ Delphini.....		20 32 8.52	+ 0.48	8.24		20 32 17.24	— 3.43
19		Oeltz. Arg. 21012.	4	20 39 5.38	+ 0.72	8.24		20 39 14.34	— 2.82
20		B.A.C. 7268 .....		20 50 56.28	+ 0.53	8.24	8.32	20 51 5.05	— 2.99
21	Aug. 20	♂ Aquilæ .....		18 27 23.34	+ 0.44	8.35	8.41	18 27 32.13	— 3.41
22		111 Herculis .....		18 40 39.23	+ 0.48	8.35		18 40 48.06	— 2.98
23		16 Lyre.....		18 57 19.00	+ 0.56	8.35		18 57 27.91	— 2.58
24		B.A.C. 6567 .....		19 5 14.08	+ 0.50	8.36		19 5 22.94	— 2.85
25		Groom. 1119 S.P.	5	19 7 45.80	— 8.14	8.36	* 7.85	7 7 46.02	— 11.88
26		♂ L. ....		19 9 22.15	+ 0.42	8.36		19 10 39.88	
27		λ Sagittari .....		19 27 59.08	+ 0.43	8.36	8.40	19 28 7.87	— 4.13
28		σ Draconis .....	5	19 32 31.06	+ 0.77	8.36		19 32 40.19	— 2.32
29		B.A.C. 6923 .....		20 2 6.92	+ 0.43	8.36		20 2 15.71	— 4.06
30		Radcliffe 4721 ...	5	20 10 58.00	+ 2.21	8.36	* 7.70	20 11 8.57	— 2.34
31		γ Cygni.....		20 17 2.06	+ 0.53	+ 8.36	+ 8.32	20 17 10.95	— 2.96
August 17. The transit instrument was reversed.									
19. Partially cloudy all night.									
1—4. Cloudy.				26. Duration of transit of semi-diameter applied, + 68.95.					
6. Duration of transit of semi-diameter applied, + 69.74.									

LAMP WEST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Aug. 20	26 Vulpeculæ ...		20 29 57.52	+ 0.49	+ 8.36	+ 8.36	20 30 6.37	- 3.18
2		B.A.C. 7157 .....		20 33 52.88	+ 0.47	8.36		20 34 1.71	- 3.34
3		51 Cygni .....		20 37 43.97	+ 0.56	8.36	8.32	20 37 52.89	- 2.91
4		7 Cephei .....	5	20 42 17.66	+ 0.65	8.37		20 42 26.68	- 2.84
5		18 Delphini .....		20 51 30.14	+ 0.46	8.37		20 51 38.97	- 3.45
6		B.A.C. 7300 .....		20 54 52.77	+ 0.43	8.37		20 55 1.57	- 4.34
7	Aug. 23	ε <sup>3</sup> Lyrae ..... (1st)	4	18 39 33.64	+ 0.41	8.94		18 39 42.99	- 2.58
8		ε <sup>3</sup> Lyrae ..... (2d)	5	18 39 34.08	+ 0.41	8.94		18 39 43.43	- 2.58
9		R.H.C. 2882 .....	3	19 0 29.58	+ 3.18	8.94	* 7.31	19 0 41.70	+ 1.55
10		B.A.C. 6666 .....		19 21 0.07	+ 0.27	8.94		19 21 9.28	- 4.15
11		B.A.C. 6712 .....	5	19 28 39.60	+ 0.54	8.94		19 28 49.08	- 2.44
12		B.A.C. 6773 .....		19 39 32.32	+ 0.28	8.94		19 39 41.54	- 4.03
13		ω Sagittarii .....		19 47 3.28	+ 0.27	8.94		19 47 12.49	- 4.24
14		B.A.C. 6867 .....	5	19 53 6.12	+ 0.54	8.94		19 53 15.60	- 2.57
15		Rad. 2099 ... S.P.	5	20 5 50.30	- 0.25	8.94	* 7.25	8 5 58.99	- 3.41
16		* N.P.D. 106° 58'		20 14 24.65	+ 0.28	8.94	9.04	20 14 33.87	- 3.99
17		B.A.C. 7069 .....	4	20 23 49.58	+ 0.28	8.95		20 23 58.81	- 4.19
18		B.A.C. 7070 .....	5	20 23 51.56	+ 0.28	8.95		20 24 0.79	- 4.19
19		W.B. xx. 821 .....		20 32 19.37	+ 0.32	8.95		20 32 28.64	- 3.52
20		74 Draconis ..... ●	5	20 37 22.74	+ 1.32	8.95		20 37 33.01	- 2.66
21		15 Delphini .....		20 42 46.11	+ 0.33	8.95		20 42 55.39	- 3.40
22		1 Equulei ... (1st)	4	20 51 53.08	+ 0.32	8.95		20 52 2.35	- 3.56
23		1 Equulei ... (2d)	5	20 51 53.90	+ 0.32	8.95		20 52 3.17	- 3.56
24		B.A.C. 7334 .....		21 0 6.50	+ 0.30	8.95		21 0 15.75	- 3.78
25		W.B. xxi. 246 ...		21 11 25.75	+ 0.32	8.95		21 11 35.02	- 3.52
26		ε Capricorni .....		21 14 15.10	+ 0.28	8.95	8.85	21 14 24.33	- 4.09
27		B.A.C. 7468 .....		21 21 58.14	+ 0.49	8.95		21 22 7.58	- 3.03
28		β <sup>1</sup> Cephei .....	5	21 26 40.16	+ 0.73	8.95		21 26 49.84	- 3.07
29		γ Capricorni .....		21 32 8.02	+ 0.28	8.95	8.90	21 32 17.25	- 4.09
30		B.A.C. 7562 .....		21 37 15.50	+ 0.30	8.95		21 37 24.75	- 3.90
31		δ 1 L. ....		21 44 1.05	+ 0.28	8.95		21 45 15.10	
32		50 Aquarii .....	6	22 16 45.34	+ 0.28	8.95		22 16 54.57	- 3.97
33		34 Pegasi .....		22 19 18.02	+ 0.32	8.95	8.97	22 19 27.29	- 3.64
34		σ Aquarii .....		22 23 2.35	+ 0.29	+ 8.95	+ 9.01	22 23 11.59	- 3.90
31. Duration of transit of semi-diameter applied, + 64.82.									

## LAMP WEST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Aug. 23	$\nu$ Aquarii .....		22 26 50.32	+ 0.28	+ 8.95		22 26 59.55	- 4.15
2	Aug. 25	$\omega$ Aquilæ .....		19 11 2.65	+ 0.46	9.02	+ 9.03	19 11 12.13	- 3.15
3		$\delta$ Aquilæ .....		19 18 14.10	+ 0.44	9.02	9.05	19 18 23.56	- 3.34
4		$\alpha$ Vulpeculæ .....		19 22 41.34	+ 0.48	9.02		19 22 50.84	- 2.97
5		B.A.C. 6727 .....		19 31 29.15	+ 0.42	9.02		19 31 38.59	- 4.07
6		Rad. 2020 ... S.P. 5		19 38 9.60	- 0.80	9.02	* 7.95	7 38 17.82	- 4.96
7		R.H.C. 3000 .....	5	19 49 8.20	+ 2.44	9.02		19 49 19.66	- 0.37
8		B.A.C. 6889 .....		19 56 30.87	+ 0.43	9.02		19 56 40.32	- 4.08
9		B.A.C. 6907 .....		20 0 22.58	+ 0.42	9.02		20 0 32.02	- 3.91
10		32 Vulpeculæ ...		20 48 24.14	+ 0.49	9.02	9.18	20 48 33.65	- 3.17
11		Radcliffe 5090 ... 5		20 55 56.00	+ 2.17	9.02	* 7.95	20 56 7.19	- 3.03
12		B. Z. 314. 125 ...		21 1 15.69	+ 0.51	9.02	9.06	21 1 25.22	- 3.09
13		19 Aquarii .....		21 17 29.41	+ 0.45	9.02		21 17 38.88	- 3.91
14		Piazzi xxi. 127 ...		21 20 1.60	+ 0.42	9.02		21 20 11.04	- 4.26
15		71 Cygni .....		21 24 6.31	+ 0.56	9.02	8.78	21 24 15.89	- 3.08
16	Aug. 27	B.A.C. 6563 .....	5	19 3 43.92	+ 0.96	9.14		19 3 54.02	- 1.23
17		B.A.C. 6727 .....		19 31 29.20	+ 0.43	9.14		19 31 38.77	- 4.05
18		15 Cygni ... ..		19 39 2.51	+ 0.51	9.14	9.10	19 39 12.16	- 2.79
19		$\alpha$ Aquilæ .....		19 43 45.07	+ 0.45	9.14	9.05	19 43 54.66	- 3.31
20		$\xi$ Aquilæ .....		19 47 15.67	+ 0.46	9.14	9.18	19 47 25.27	- 3.31
21		B.A.C. 6889 .....		19 56 30.90	+ 0.43	9.14		19 56 40.47	- 4.08
22		B.A.C. 6907 .....		20 0 22.65	+ 0.43	9.14		20 0 32.22	- 3.89
23		Radcliffe 4721 ... 3		20 10 55.89	+ 2.11	9.14	* 8.66	20 11 7.14	- 1.07
24		Rad. 2189 ... S.P. 3		20 34 32.45	- 1.65	9.14	* 8.69	8 34 39.94	- 2.93
25		32 Vulpeculæ ...		20 48 24.01	+ 0.49	9.14	9.31	20 48 33.64	- 3.17
26		B. Z. 314. 125 ... 3		21 1 15.69	+ 0.51	9.14	9.05	21 1 25.34	- 3.08
27	Aug. 28	B.A.C. 6666 .....		19 20 59.58	+ 0.46	9.00		19 21 9.04	- 4.12
28		$\mu$ Aquilæ .....		19 27 2.81	+ 0.53	9.00	9.15	19 27 12.34	- 3.25
29		42 Aquilæ .....		19 30 9.17	+ 0.50	8.99	9.07	19 30 18.66	- 3.53
30		15 Cygni .....	5	19 39 2.66	+ 0.63	8.99	8.81	19 39 12.28	- 2.77
31		$\gamma$ Cygni .....		20 17 1.20	+ 0.64	8.99	8.99	20 17 10.83	- 2.88
32		Radcliffe 4881 ... 5		20 28 38.10	+ 2.67	+ 8.99	+ * 8.20	20 28 49.76	- 1.76
18—21. Cloudy.				23—26. Cloudy.					

LAMP WEST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Aug. 28	Radcliffe 4894 ...	5	20 30 22.60	+ 2.68	+ 8.99	+ 8.81	20 30 34.27	- 1.82
2		Rad. 2343 ... S.P.	5	21 22 43.60	- 1.71	8.98	* 8.46	9 22 50.87	- 1.30
3		κ Capricorni .....		21 34 38.16	+ 0.47	8.98	8.99	21 34 47.61	- 4.18
4		16 Pegasi .....		21 46 30.00	+ 0.59	8.98	8.94	21 46 39.57	- 3.34
5	Aug. 30	λ <sup>3</sup> Sagittarii .....		19 27 58.54	+ 0.56	8.81	8.74	19 28 7.91	- 4.06
6		Rad. 2020 ... S.P.	5	19 38 10.20	- 1.11	8.81	* 9.05	7 38 17.90	- 6.19
7		R.H.C. 3000 .....	5	19 49 7.00	+ 1.97	8.81		19 49 17.78	+ 0.60
8		B.A.C. 6878 .....		19 55 13.87	+ 0.54	8.81	8.92	19 55 23.22	- 4.09
9		B.A.C. 6911 .....		20 0 39.61	+ 0.55	8.81		20 0 48.97	- 3.75
10		ξ <sup>3</sup> Capricorni.....		20 4 25.37	+ 0.55	8.81		20 4 34.73	- 3.82
11		68 Draconis .....	5	20 9 8.22	+ 0.70	8.81		20 9 17.73	- 2.44
12		B.A.C. 7009 .....		20 15 23.91	+ 0.55	8.81		20 15 33.27	- 3.90
13		72 Draconis .....	5	20 20 58.94	+ 0.71	8.81		20 21 8.46	- 2.51
14		B.A.C. 7083 .....		20 25 11.20	+ 0.62	8.81		20 25 20.63	- 2.81
15		(S) Capricorni ...		20 33 31.17	+ 0.56	8.81		20 33 40.54	- 4.10
16		B.A.C. 7217 .....	5	20 41 21.02	+ 1.04	8.81		20 41 30.87	- 2.31
17		32 Vulpeculæ ...		20 48 24.21	+ 0.59	8.81	8.99	20 48 33.61	- 3.15
18		Radcliffe 5090 ...	5	20 55 54.70	+ 1.75	8.81	* 9.03	20 56 5.26	- 2.50
19		W. B. xxi. 249 ...		21 11 32.57	+ 0.56	8.81		21 11 41.94	- 3.53
20		33 Capricorni ...		21 16 1.01	+ 0.56	8.81		21 16 10.38	- 4.23
21		71 Cygni .....		21 24 6.32	+ 0.63	8.81	8.68	21 24 15.76	- 3.06
22		32 Aquarii.....		21 57 23.59	+ 0.56	8.81	8.73	21 57 32.96	- 3.75
23	Sept. 1	ζ Sagittarii .....		18 53 29.40	+ 0.54	8.71		18 53 38.65	- 4.02
24		B.A.C. 6563 .....	5	19 3 43.60	+ 0.97	8.71		19 3 53.28	- 0.80
25		* N.P.D. 70° 48' .		19 9 8.17	+ 0.56	8.71		19 9 17.44	- 2.92
26		ω Aquilæ .....		19 11 2.87	+ 0.56	8.71	8.63	19 11 12.14	- 3.07
27		B.A.C. 6666 .....		19 20 59.87	+ 0.55	8.71		19 21 9.13	- 4.08
28		B.A.C. 6712 .....	5	19 28 39.28	+ 0.67	8.71		19 28 48.66	- 2.19
29		B.A.C. 6785 .....		19 41 6.86	+ 0.55	8.71		19 41 16.12	- 3.69
30		ω Sagittarii .....		19 47 3.27	+ 0.55	8.71		19 47 12.53	- 4.17
31		R.H.C. 3015 .....	3	19 52 58.68	+ 2.42	8.71		19 53 9.81	+ 1.77
32		B.A.C. 6911 .....		20 0 40.08	+ 0.55	8.71	+ 8.67	20 0 49.34	- 3.75
33		ξ <sup>3</sup> Capricorni.....		20 4 25.78	+ 0.55	+ 8.71		20 4 35.04	- 3.82
20. White: not at all red.									

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Sept. 1	29 Cygni .....		20 9 6.71	+ 0.60	+ 8.71		20 9 16.02	- 2.86
2		B.A.C. 7006 .....		20 14 23.23	+ 0.61	8.71		20 14 32.55	- 2.88
3		24 Cephei (Hev.) 5	5	20 32 11.80	+ 5.53	8.71	+ * 7.65	20 32 26.04	+ 2.36
4		B.A.C. 7217 .....	5	20 41 21.17	+ 1.07	8.71		20 41 30.95	- 2.17
5		32 Vulpeculæ ...		20 48 24.51	+ 0.58	8.71	8.69	20 48 33.80	- 3.14
6		1 Equulei ... (1st) 5	5	20 51 53.12	+ 0.55	8.71		20 52 2.38	- 3.56
7		1 Equulei ... (2d) 4	4	20 51 53.95	+ 0.55	8.71		20 52 3.21	- 3.56
8		χ Capricorni .....		21 0 20.25	+ 0.55	8.71	8.72	21 0 29.51	- 4.22
9		τ Cygni .....		21 9 1.34	+ 0.60	8.71	8.67	21 9 10.65	- 3.08
10		ι Capricorni .....		21 14 14.94	+ 0.54	8.71	8.77	21 14 24.19	- 4.11
11		19 Aquarii .....		21 17 29.55	+ 0.55	8.71		21 17 38.81	- 3.91
12		Rad. 2343 ... S.P. 5	5	21 22 43.80	- 0.71	8.71	* 7.69	9 22 51.80	- 1.68
13		B.A.C. 7494 .....	5	21 26 50.28	+ 0.68	8.71		21 26 59.67	- 2.96
14		ξ Aquarii .....		21 30 5.88	+ 0.55	8.71	8.79	21 30 15.14	- 3.89
15	Sept. 6	5 Pegasi .....		21 31 1.24	+ 0.50	8.45	8.38	21 31 10.19	- 3.38
16		κ Capricorni .....		21 34 38.67	+ 0.50	8.45	8.46	21 34 47.62	- 4.19
17		μ <sup>3</sup> Cygni .....	5	21 37 42.16	+ 0.51	8.45		21 37 51.12	- 3.28
18		16 Pegasi .....		21 46 30.42	+ 0.51	8.45	8.59	21 46 39.38	- 3.33
19		20 Pegasi .....		21 54 4.92	+ 0.50	8.45	8.48	21 54 13.87	- 3.53
20		32 Aquarii .....	4	21 57 24.06	+ 0.50	8.45	8.33	21 57 33.01	- 3.76
21	Sept. 13	B.A.C. 6773 .....		19 39 31.67	+ 0.47	9.21		19 39 41.35	- 3.83
22		α Aquilæ .....		19 43 44.71	+ 0.41	9.21	9.29	19 43 54.33	- 3.15
23		ξ Aquilæ .....		19 47 15.52	+ 0.41	9.21	9.22	19 47 25.14	- 3.15
24		R.H.C. 3015 .....	3	19 52 54.02	+ 0.34	9.21		19 53 3.57	+ 5.76
25		B.A.C. 6911 .....		20 0 39.42	+ 0.44	9.21	9.32	20 0 49.07	- 3.63
26		B.A.C. 6941 .....		20 4 42.01	+ 0.41	9.21		20 4 51.63	- 2.97
27		B.A.C. 6986 .....		20 11 45.12	+ 0.38	9.21	9.35	20 11 54.71	- 2.62
28		24 Cephei (Hev.) 4	4	20 32 7.95	+ 0.34	9.21	* 7.92	20 32 17.50	+ 11.09
29		18 Delphini .....		20 51 29.11	+ 0.40	9.21		20 51 38.72	- 3.36
30		η Capricorni .....		20 56 13.90	+ 0.47	9.21	8.86	20 56 23.58	- 4.11
31		B.A.C. 7584 .....		21 39 23.92	+ 0.40	9.22		21 39 33.54	- 3.29
32		Rad. 2404 ... S.P. 4	4	21 45 7.00	+ 0.35	9.22	+ * 7.89	9 45 16.57	- 2.14
33		B.A.C. 7676 .....		21 56 32.07	+ 0.37	+ 9.22		21 56 41.66	- 3.08

19, 20. Cloudy.

LAMP WEST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Sept. 13	B.A.C. 7740 .....		22 4 36.55	+ 0.44	+ 9.22		22 4 46.21	- 4.00
2	Sept. 15	72 Draconis .....	5	20 20 57.86	+ 0.53	9.49		20 21 7.88	- 2.02
3		B.A.C. 7090 .....	5	20 26 22.08	+ 0.57	9.49		20 26 32.14	- 1.79
4		$\alpha$ Cygni.....		20 36 28.28	+ 0.49	9.49	+ 9.34	20 36 38.26	- 2.62
5		$\gamma^1$ Delphini .....		20 39 56.49	+ 0.43	9.49	9.74	20 40 6.41	- 3.20
6		B.A.C. 7290 .....	6	20 53 7.36	+ 0.49	9.49	9.46	20 53 17.34	- 2.74
7		$\theta$ Capricorni .....	6	20 57 51.68	+ 0.49	9.49	9.57	20 58 1.66	- 4.02
8		$\tau$ Cygni .....	21	9 0.66	+ 0.48	9.49	9.35	21 9 10.63	- 2.96
9	Sept. 18	R.H.C. 3000 .....	2	19 49 5.21	+ 2.32	9.70		19 49 17.23	+ 5.93
10		B.A.C. 6889 .....		19 56 30.14	+ 0.57	9.70		19 56 40.41	- 3.86
11		Rümker 8047 ...		20 3 8.35	+ 0.59	9.70		20 3 18.64	- 3.16
12		4 Capricorni .....		20 9 34.14	+ 0.56	9.70		20 9 44.40	- 3.93
13		B.A.C. 7006 .....	5	20 14 21.80	+ 0.64	9.70		20 14 32.14	- 2.62
14		B.A.C. 7049 .....		20 21 4.87	+ 0.57	9.70		20 21 15.14	- 4.01
15		$\delta$ 1 L. ....		20 33 42.61	+ 0.57	9.70		20 34 59.67	
16		$\psi$ Capricorni .....		20 37 34.81	+ 0.56	9.70	9.83	20 37 45.07	- 4.17
17		15 Delphini .....		20 42 44.70	+ 0.59	9.70		20 42 54.99	- 3.25
18		$\theta$ Capricorni .....		20 57 51.37	+ 0.56	9.70	9.78	20 58 1.63	- 3.99
19		27 Capricorni ...	21	1 19.24	+ 0.57	9.70		21 1 29.51	- 4.11
20		$\tau$ Cygni .....	21	9 0.00	+ 0.64	9.70	9.80	21 9 10.34	- 2.91
21		$\epsilon$ Capricorni .....	21	14 13.97	+ 0.56	9.70	9.64	21 14 24.23	- 4.03
22		Rad. 2343 ... S.P.	5	21 22 44.70	- 0.85	9.70	* 9.28	9 22 53.55	- 4.12
23		Rad. 2346 ... S.P.	5	21 23 31.00	- 0.84	9.70	* 9.74	9 23 39.86	- 4.07
24		Rad. 2350 ... S.P.	5	21 24 17.50	- 0.84	9.70	* 9.08	9 24 26.36	- 4.02
25		41 Capricorni ...	21	33 49.41	+ 0.56	9.70		21 33 59.67	- 4.28
26		$\mu^3$ Cygni .....	21	37 41.05	+ 0.62	9.70		21 37 51.37	- 3.21
27		W.B. xxi. 1125 ...	21	48 0.18	+ 0.59	9.70		21 48 10.47	- 3.55
28		20 Pegasi .....	21	54 3.56	+ 0.59	9.70	9.72	21 54 13.85	- 3.50
29		32 Aquarii .....	21	57 22.71	+ 0.58	9.70	9.59	21 57 32.99	- 3.75
30		$\epsilon$ Pegasi .....	22	0 17.33	+ 0.61	9.70	9.51	22 0 27.64	- 3.35
31		50 Aquarii .....	22	16 44.13	+ 0.57	9.70		22 16 54.40	- 4.08
32		Groom. 3820 .....	5	22 23 53.80	+ 2.15	9.70	* 9.33	22 24 5.65	- 4.77
33		Groom. 3824 .....	5	22 24 23.80	+ 2.18	+ 9.70	+ * 9.45	22 24 35.68	- 4.86
2—8. Cloudy.				21. Thin clouds.					
15. Duration of transit of semi-diameter applied, + 66''.79.				26. Very unsteady.					

## LAMP WEST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Sept. 22	$\theta$ Capricorni .....		20 57 51.40	+ 0.53	+ 9.89	+ 9.74	20 58 1.82	- 3.95
2		R.H.C. 3232 .....	5	21 12 1.70	+ 1.03	9.89		21 12 12.62	+ 0.77
3		Rad. 2343 ... S.P. 5	5	21 22 44.20	- 0.03	9.89	* 9.64	9 22 54.06	- 4.82
4		Rad. 2346 ... S.P. 4	4	21 23 31.65	- 0.04	9.89	* 8.96	9 23 41.50	- 4.76
5		Rad. 2350 ... S.P. 5	5	21 24 17.50	- 0.04	9.89	* 8.95	9 24 27.35	- 4.71
6		B.A.C. 7553 .....		21 35 29.71	+ 0.52	9.89		21 35 40.12	- 3.46
7		B.A.C. 7736 (2d) 5	5	22 3 42.12	+ 0.54	9.89		22 3 52.55	- 2.96
8		50 Aquarii .....		22 16 43.94	+ 0.54	9.89		22 16 54.37	- 4.05
9		Groom. 3820 .....	5	22 23 54.60	+ 1.05	9.90	* 9.18	22 24 5.55	- 4.25
10		51 Pegasi .....		22 50 22.59	+ 0.52	9.90	10.03	22 50 33.01	- 3.56
11		$\beta$ Piscium .....		22 56 32.32	+ 0.53	9.90	9.96	22 56 42.75	- 3.78
12		A Piscium .....		23 1 18.04	+ 0.53	9.90		23 1 28.47	- 3.82
13		$\gamma$ 1 L. ....		23 48 5.14	+ 0.53	9.90		23 49 19.99	
14		$\gamma$ 2 L. ....		23 50 13.97					
15		30 Piscium .....		23 54 34.31	+ 0.53	9.90	9.76	23 54 44.74	- 3.96
16		6 Ceti .....		0 3 55.62	+ 0.54	9.90	10.06	0 4 6.06	- 4.10
17		$\delta$ Piscium .....		0 13 11.12	+ 0.52	9.90	9.85	0 13 21.54	- 3.82
18		45 Piscium .....		0 18 16.21	+ 0.52	9.90	9.88	0 18 26.63	- 3.83
19	Sept. 24	W.B. xxi. 246 ...		21 11 24.41	+ 0.66	9.60		21 11 34.67	- 3.37
20		1 Pegasi .....		21 15 24.05	+ 0.65	9.60		21 15 34.30	- 3.19
21		B.A.C. 7468 .....		21 21 56.34	+ 0.67	9.60		21 22 6.61	- 2.63
22		B.A.C. 7510 .....	5	21 28 43.54	+ 0.80	9.60		21 28 53.94	- 1.51
23		41 Capricorni ...		21 33 49.08	+ 0.70	9.60		21 33 59.38	- 4.22
24		11 Cephei .....	5	21 39 41.54	+ 0.70	9.60		21 39 51.84	- 2.37
25		20 Pegasi .....		21 54 3.51	+ 0.66	9.60	9.67	21 54 13.77	- 3.47
26		$\alpha$ Aquarii .....		21 58 22.84	+ 0.67	9.60	9.55	21 58 33.11	- 3.72
27		B.A.C. 7720 .....		22 2 51.27	+ 0.67	9.60	9.73	22 3 1.54	- 3.80
28		$\theta$ Aquarii .....		22 9 13.96	+ 0.68	9.60	9.48	22 9 24.24	- 3.90
29		$\gamma$ Aquarii .....		22 14 12.78	+ 0.67	9.60	9.58	22 14 23.05	- 3.78
30		34 Pegasi .....		22 19 17.09	+ 0.67	9.60	9.60	22 19 27.36	- 3.69
31		Groom. 3820 .....	5	22 23 54.20	+ 1.05	9.60	* 9.31	22 24 4.85	- 3.99
32		$\kappa$ Aquarii .....		22 30 17.71	+ 0.67	9.60		22 30 27.98	- 3.88
33		Rad. 2560 ... S.P. 5	5	22 40 56.30	+ 0.16	9.60	+ * 9.29	10 41 6.06	- 0.14
34		94 Aquarii ... (2d)		23 11 32.32	+ 0.68	+ 9.61		23 11 42.61	- 4.03

September 22. Light hazy clouds throughout the night.

14. + 0.05 has been applied to the transit of  
2 L. for defective illumination.  
19, 20. Light clouds.

24. Cloudy.  
31. Unsteady.



LAMP WEST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Sept. 30	W. B. xxi. 249 ...		21 11 30.98	+ 0.70	+ 10.09		21 11 41.77	- 3.30
2		Piazzi xxi. 127 ...		21 20 0.44	+ 0.74	10.09		21 20 11.27	- 4.09
3		$\beta^1$ Cephei ..... 5	5	21 26 37.92	+ 0.76	10.09		21 26 48.77	- 1.94
4		$\gamma$ Capricorni .....		21 32 6.29	+ 0.73	10.09	+ 10.07	21 32 17.11	- 3.98
5		B.A.C. 7553 .....		21 35 29.31	+ 0.60	10.09		21 35 40.00	- 3.38
6		Rad. 2404 ... S.P. 5	5	21 45 7.80	+ 0.20	10.09	* 9.88	9 45 18.09	- 4.83
7		B.A.C. 7676 .....		21 56 30.59	+ 0.71	10.09		21 56 41.39	- 2.83
8		$\gamma$ Aquarii .....		22 14 12.19	+ 0.71	10.09	10.10	22 14 22.99	- 3.75
9		Groom. 3820 .....	3	22 23 52.89	+ 1.15	10.09	* 9.68	22 24 4.13	- 3.24
10		Groom. 3824 .....	3	22 24 22.72	+ 1.15	10.09	* 9.98	22 24 33.96	- 3.31
11		31 Cephei .....	5	22 32 8.00	+ 0.77	10.09		22 32 18.86	- 3.13
12		$\tau^3$ Aquarii .....		22 41 57.67	+ 0.72	10.09	9.98	22 42 8.48	- 4.07
13		51 Pegasi .....	5	22 50 22.20	+ 0.69	10.09	10.23	22 50 32.98	- 3.54
14		3 Piscium .....		22 53 14.00	+ 0.71	10.09		22 53 24.80	- 3.83
15		3 Andromedæ ...		22 57 41.57	+ 0.71	10.09	10.10	22 57 52.37	- 3.40
16		5 Andromedæ ...		23 1 11.54	+ 0.71	10.09	10.06	23 1 22.34	- 3.43
17		B.A.C. 8221 .....		23 30 10.84	+ 0.73	10.09		23 30 21.66	- 4.12
18		B.A.C. 8239 .....		23 33 40.90	+ 0.72	10.09		23 33 51.71	- 4.08
19	Oct. 1	$\gamma$ Aquarii .....		22 14 12.12	+ 0.69	10.09	10.19	22 14 22.90	- 3.75
20		37 Pegasi .....		22 22 40.11	+ 0.68	10.09	10.08	22 22 50.88	- 3.68
21		$\eta$ Aquarii .....		22 27 56.47	+ 0.69	10.09	10.13	22 28 7.25	- 3.76
22		$\zeta$ Pegasi .....		22 34 15.66	+ 0.68	10.09	10.08	22 34 26.43	- 3.61
23		5 Andromedæ ...		23 1 11.62	+ 0.70	10.09	9.98	23 1 22.41	- 3.42
24		B.A.C. 8083 .....	5	23 6 20.50	+ 0.73	10.09		23 6 31.32	- 3.50
25		B.A.C. 8104 .....	5	23 9 28.40	+ 0.81	10.09		23 9 39.30	- 3.96
26		65 Pegasi .....		23 15 29.19	+ 0.68	10.09		23 15 39.96	- 3.64
27	Oct. 5	B.A.C. 7720 .....		22 2 50.88	+ 0.58	10.13	10.14	22 3 1.59	- 3.73
28		$\theta$ Aquarii .....		22 9 13.45	+ 0.58	10.13	10.02	22 9 24.16	- 3.83
29		Groom. 3820 .....	5	22 23 51.10	+ 2.26	10.12	* 9.57	22 24 3.48	- 2.34
30		31 Cephei .....	5	22 32 7.46	+ 0.97	10.12		22 32 18.55	- 2.96
31		Rad. 2560 ... S.P. 3	3	22 40 58.78	- 1.13	10.12	* 9.56	10 41 7.77	- 1.64
32		3 Piscium .....		22 53 14.04	+ 0.58	10.12		22 53 24.74	- 3.82
33		3 Andromedæ ...		22 57 41.67	+ 0.70	+ 10.12	+ 9.98	22 57 52.49	- 3.37

## LAMP WEST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Oct. 5	Oeltz. Arg. 25223.	5	23 3 39.30	+ 0.75	+ 10.12		23 3 50.17	- 3.43
2		$\psi^1$ Aquarii .....		23 8 20.28	+ 0.57	10.12	+ 10.21	23 8 30.97	- 4.00
3		B.A.C. 8184 .....		23 22 4.74	+ 0.58	10.12	10.28	23 22 15.44	- 3.94
4		B.A.C. 8221 .....		23 30 11.18	+ 0.57	10.12		23 30 21.87	- 4.11
5		B.A.C. 8333 .....		23 52 16.74	+ 0.58	10.12		23 52 27.44	- 4.01
6		30 Piscium .....		23 54 33.97	+ 0.58	10.11	10.12	23 54 44.66	- 4.01
7		33 Piscium .....		23 57 57.34	+ 0.58	10.11	10.10	23 58 8.03	- 4.02
8	Oct. 8	B.A.C. 7494 .....	5	21 26 48.62	+ 0.79	9.34		21 26 58.75	- 2.14
9		5 Pegasi.....		21 30 59.84	+ 0.72	9.34	9.29	21 31 9.90	- 3.11
10		41 Capricorni ...		21 33 49.23	+ 0.71	9.34		21 33 59.28	- 4.08
11		$\mu^1$ Cygni .....		21 37 40.60	+ 0.73	9.34		21 37 50.67	- 2.98
12		Rad. 2404 ... S.P.	5	21 45 10.40	- 0.40	9.33	* 9.41	9 45 19.33	- 6.35
13		B.A.C. 7676 .....		21 56 31.20	+ 0.78	9.33		21 56 41.31	- 2.69
14		B.A.C. 7720 .....		22 2 51.52	+ 0.70	9.33	9.34	22 3 1.55	- 3.69
15		B.A.C. 7753 .....		22 6 24.05	+ 0.74	9.33		22 6 34.12	- 3.07
16		50 Aquarii.....		22 16 44.31	+ 0.70	9.33		22 16 54.34	- 3.97
17		Groom. 3820.....	5	22 23 51.20	+ 1.84	9.33	* 9.36	22 24 2.37	- 1.88
18		B.A.C. 7878 .....	5	22 29 8.96	+ 0.91	9.33		22 29 19.20	- 2.82
19		B.A.C. 7950 .....		22 40 1.88	+ 0.76	9.33	9.41	22 40 11.97	- 3.19
20		2 Piscium .....		22 52 4.50	+ 0.70	9.33		22 52 14.53	- 3.78
21		$\beta$ Piscium .....		22 56 32.62	+ 0.70	9.33	9.46	22 56 42.65	- 3.75
22		5 Andromedæ ...		23 1 12.31	+ 0.76	9.33	9.17	23 1 22.40	- 3.36
23		B.A.C. 8083 .....	5	23 6 20.98	+ 0.80	9.33		23 6 31.11	- 3.42
24		B.A.C. 8122 .....	5	23 12 38.86	+ 0.95	9.33		23 12 49.14	- 3.82
25		$\kappa$ Piscium .....		23 19 33.02	+ 0.70	9.33	9.32	23 19 43.05	- 3.86
26		B.A.C. 8338 .....	5	23 53 24.62	+ 0.82	9.32		23 53 34.76	- 4.08
27		$\beta$ Cassiopeie.....	5	0 1 31.38	+ 0.79	9.32		0 1 41.49	- 4.09
28	Oct. 9	B.A.C. 7553 .....		21 35 29.94	+ 0.70	9.26		21 35 39.90	- 3.28
29		B.A.C. 7586 .....		21 39 49.28	+ 0.73	9.26		21 39 59.27	- 3.04
30		Rad. 2404 ... S.P.	5	21 45 11.20	- 0.67	9.26	* 9.08	9 45 19.79	- 6.55
31		B.A.C. 7745 .....		22 5 39.51	+ 0.68	9.26		22 5 49.45	- 4.23
32		$\eta$ Aquarii .....		22 27 57.18	+ 0.70	9.25	+ 9.36	22 28 7.13	- 3.71
33		2 Piscium .....		22 52 4.98	+ 0.69	+ 9.25	.	22 52 14.92	- 3.78
28, 29. Cloudy.				32, 33. Cloudy.					

LAMP WEST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Oct. 9	$\beta$ Piscium .....		22 56 33.07	+ 0.70	+ 9.25	+ 9.01	22 56 43.02	- 3.75
2		$\delta$ Andromedæ ...		23 1 12.24	+ 0.79	9.25	9.20	23 1 22.28	- 3.35
3		$\gamma$ Piscium .....		23 9 42.21	+ 0.69	9.25	9.18	23 9 52.15	- 3.84
4		B.A.C. 8156 .....		23 16 42.54	+ 0.73	9.25	9.50	23 16 52.52	- 3.54
5		Groom. 4101 .....	4	23 27 46.80	+ 2.79	9.25	* 9.14	23 27 58.84	- 9.10
6	Oct. 11	$\alpha$ Aquarii .....		21 58 23.44	+ 0.65	8.74	8.84	21 58 32.83	- 3.59
7		B.A.C. 7720 .....		22 2 52.14	+ 0.65	8.74	8.75	22 3 1.53	- 3.67
8		B.A.C. 7745 .....		22 5 40.11	+ 0.63	8.74		22 5 49.48	- 4.22
9		$\theta$ Aquarii .....		22 9 14.67	+ 0.64	8.74	8.69	22 9 24.05	- 3.78
10		49 Aquarii .....		22 15 30.48	+ 0.62	8.74		22 15 39.84	- 4.23
11		35 Pegasi .....		22 20 34.24	+ 0.65	8.74	8.91	22 20 43.63	- 3.58
12		58 Aquarii .....		22 24 3.87	+ 0.64	8.74		22 24 13.25	- 3.90
13		B.A.C. 7881 .....	5	22 29 39.20	+ 1.18	8.74		22 29 49.12	- 2.58
14		Rad. 2560 ... S.P.	5	22 41 0.70	- 1.24	8.74	* 8.73	10 41 8.20	- 2.48
15		2 Piscium .....		22 52 5.11	+ 0.64	8.74		22 52 14.49	- 3.75
16		3 Andromedæ ..		22 57 42.97	+ 0.78	8.73	8.52	22 57 52.48	- 3.29
17		Oeltz. Arg. 25223 ..	5	23 3 40.26	+ 0.84	8.73		23 3 49.83	- 3.35
18		$\sigma$ Cephei .....	5	23 12 42.74	+ 0.95	8.73		23 12 52.42	- 3.57
19		Groom. 4101 .....	5	23 27 46.50	+ 3.12	8.73	* 8.82	23 27 58.35	- 8.87
20	Oct. 13	$\gamma$ Capricorni .....		21 32 8.00	+ 0.45	8.54	8.49	21 32 16.99	- 3.83
21		Rad. 2404 ... S.P.	3	21 45 12.77	- 0.34	8.54	* 8.01	9 45 20.97	- 7.37
22		B.A.C. 7676 .....	5	21 56 32.10	+ 0.49	8.54		21 56 41.13	- 2.56
23		$\epsilon$ Pegasi .....		22 0 18.37	+ 0.46	8.54	8.40	22 0 27.37	- 3.13
24		B.A.C. 7744 .....		22 5 14.68	+ 0.45	8.54	8.75	22 5 23.67	- 3.68
25		33 Pegasi .....		22 16 44.08	+ 0.46	8.54		22 16 53.08	- 3.29
26		Groom. 3820 .....	5	22 23 52.30	+ 1.21	8.54	* 7.97	22 24 2.05	- 1.02
27		8 Lacertæ ... (2d)		22 29 27.74	+ 0.47	8.54	8.47	22 29 36.75	- 3.11
28		$\alpha$ Pegasi .....	5	22 57 35.92	+ 0.45	8.54	8.58	22 57 44.91	- 3.58
29	Oct. 20	$\delta$ 1 L. ....		0 14 36.57	+ 0.58	7.06		0 15 49.74	
30		45 Piscium .....		0 18 19.08	+ 0.58	7.06	7.05	0 18 26.72	- 3.93
31		B.A.C. 1111 .....		0 22 36.48	+ 0.57	7.06		0 22 44.11	- 3.84
32		52 Piscium .....		0 25 5.60	+ 0.58	+ 7.06	+ 7.10	0 25 13.24	- 3.91
1—5. Cloudy. 20—27. Cloudy. 28. Cloudy; scarcely visible.					29. Duration of transit of semi-diameter applied, + 65".53.				

LAMP WEST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R. A. of Centre of Object.	Cor. to Mean R. A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Oct. 20	ε Andromedæ ...		0 31 00.4	+ 0.60	+ 7.06		0 31 7.70	- 3.95
2		φ <sup>1</sup> Ceti .....		0 36 58.14	+ 0.59	7.06	+ 7.10	0 37 5.79	- 4.12
3		δ Piscium .....		0 41 15.52	+ 0.58	7.06	6.98	0 41 23.16	- 3.99
4		21 Ceti .....		0 47 4.27	+ 0.58	7.06		0 47 11.91	- 4.96
5	Oct. 26	B.A.C. 7760 (2d) 5	22	7 19.32	+ 0.87	5.28		22 7 25.47	- 1.57
6		* N.P.D. 18° 59' 4	22	14 41.91	+ 0.91	5.27		22 14 48.09	- 1.63
7		* N.P.D. 19° 0' 5	22	14 46.56	+ 0.91	5.27		22 14 52.74	- 1.63
8		α Lacertæ .....	22	25 23.50	+ 0.75	5.27	5.24	22 25 29.52	- 2.68
9		15 Lacertæ .....	5	22 45 35.19	+ 0.73	5.27	5.30	22 45 41.19	- 3.01
10	Oct. 28	Groom. 67 .....	5	0 22 47.50	+ 1.92	4.68	* 4.30	0 22 54.10	- 11.39
11		B.A.C. 161 .....		0 30 10.31	+ 0.72	4.68	4.94	0 30 15.71	- 3.98
12		32 Andromedæ ...		0 33 24.91	+ 0.75	4.68	4.37	0 33 30.34	- 4.01
13		φ <sup>1</sup> Ceti .....		0 37 0.30	+ 0.72	4.68	4.81	0 37 5.70	- 4.12
14		δ Piscium .....		0 41 17.64	+ 0.72	4.68	4.72	0 41 23.04	- 3.99
15		Groom. 1937 S.P. 5	0	47 50.60	- 0.33	4.68	* 4.49	12 47 54.95	+ 5.72
16		Groom. 1940 S.P. 5	0	47 58.50	- 0.33	4.68	* 4.23	12 48 2.85	+ 5.72
17		ε Piscium .....		0.55 33.34	+ 0.73	4.68	4.56	0 55 38.75	- 4.04
18		B.A.C. 320 .....	5	1 0 11.88	+ 1.14	4.68		1 0 17.70	- 7.90
19		B.A.C. 358 .....		1 5 9.63	+ 0.74	4.68		1 5 15.05	- 4.14
20		B.A.C. 410 .....		1 15 30.34	+ 0.72	4.67		1 15 35.73	- 4.10
21	Oct. 30	Piazzi xxii. 158 ...		22 28 57.15	+ 0.62	4.20		22 29 1.97	- 3.18
22		Groom. 3888 .....		22 41 9.17	+ 0.71	4.20		22 41 14.08	- 2.86
23		2 Piscium .....		22 52 9.45	+ 0.58	4.20		22 52 14.23	- 3.61
24		α Pegasi .....		22 57 39.92	+ 0.61	4.20	4.29	22 57 44.73	- 3.45
25		6 Andromedæ ...		23 3 52.25	+ 0.71	4.20	4.14	23 3 57.16	- 3.15
26		B.A.C. 8126 .....		23 13 0.57	+ 0.74	4.19	4.10	23 13 5.50	- 3.21
27		B.A.C. 8156 .....		23 16 47.60	+ 0.65	4.19	4.37	23 16 52.44	- 3.39
28		Groom. 4101 .....	5	23 27 48.10	+ 3.51	4.19	* 3.16	23 27 55.80	- 5.08
29		78 Pegasi .....		23 36 50.05	+ 0.65	4.19	+ 4.14	23 36 54.89	- 3.55
30		δ Sculptoris .....		23 41 31.14	+ 0.53	4.19		23 41 35.86	- 4.33
31		B.A.C. 8321 .....	5	23 49 52.12	+ 1.86	4.19		23 49 58.17	- 5.50
32		β Cassiopeiæ .....	5	0 1 36.74	+ 0.82	+ 4.18		0 1 41.74	- 3.89
6—9. Cloudy.				23, 24. Cloudy.					

LAMP WEST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Oct. 30	Groom. 1884 S.P.	5	0 14 6.30	-6.35	+ 4.18	+ 3.20	12 14 4.13	+18.20
2		$\epsilon$ Andromedæ ...		0 31 2.85	+0.65	4.18		0 31 7.68	-3.95
3		$\nu^1$ Cassiopeïæ ...	5	0 46 35.76	+0.81	4.18		0 46 40.75	-4.58
4		$\zeta^1$ Piscium .....	1	6 18.38	+0.59	4.17	4.09	1 6 23.14	-4.09
5	Nov. 8	Groom. 2007 S.P.	3	1 20 20.94	-0.44	1.09	* 1.13	13 20 21.59	+10.79
6		Groom. 339 .....	5	1 32 28.00	+1.93	1.08	* 1.12	1 32 31.01	-21.12
7		$\epsilon$ Piscium .....	1	37 56.24	+0.73	1.08	1.23	1 37 58.05	-4.20
8		Lalande 3405 ...	1	44 18.57	+0.73	1.08	1.07	1 44 20.38	-4.34
9		$\beta$ Arietis .....	1	46 50.68	+0.73	1.08	1.05	1 46 52.49	-4.31
10		$\gamma^3$ Andromedæ ...	1	55 15.68	+0.76	1.08	1.02	1 55 17.52	-4.75
11		58 Andromedæ ...	1	59 58.67	+0.75	1.08	+ 1.01	2 0 0.50	-4.68
12	Nov. 9	Rad. 2560 ... S.P.	5	22 41 14.40	+0.11	0.76	-* 0.11	10 41 15.27	-8.70
13		R.H.C. 3520 .....	5	22 54 8.60	+1.28	0.76		22 54 10.64	+0.87
14		B.A.C. 8064 .....	23	2 6.48	+0.84	0.76		23 2 8.08	-4.12
15		B.A.C. 8104 .....	5	23 9 35.92	+0.91	0.75		23 9 37.58	-2.36
16		B. Z. 324. 12 ...	23	14 47.34	+0.80	0.75		23 14 48.89	-3.38
17		$\kappa$ Piscium .....	23	19 41.18	+0.81	0.75	+ 0.84	23 19 42.74	-3.65
18		B.A.C. 8184 .....	23	22 13.68	+0.82	0.75	+ 0.89	23 22 15.25	-3.73
19		B.A.C. 8221 .....	23	30 20.05	+0.81	0.75		23 30 21.61	-3.90
20		Oeltz. Arg. 25960.	5	23 36 31.70	+0.83	0.75		23 36 33.28	-3.31
21		Groom. 4154 .....	5	23 45 33.36	+0.93	0.75		23 45 35.04	-3.66
22		B.A.C. 8321 .....	5	23 49 54.42	+1.12	0.75		23 49 56.29	-4.53
23		Radcliffe 6314 ...	5	23 59 53.00	+1.48	0.75	-* 0.06	23 59 55.23	-7.35
24		$\iota$ Ceti .....		0 12 13.88	+0.81	0.75		0 12 15.44	-3.98
25		B.A.C. 86 .....	5	0 18 10.42	+0.82	0.75		0 18 11.99	-5.57
26		12 Ceti .....		0 22 50.13	+0.82	0.75	+ 0.61	0 22 51.70	-3.97
27		B.A.C. 138 .....		0 27 17.15	+0.82	0.75		0 27 18.72	-4.00
28		$\delta$ Andromedæ ...		0 31 47.08	+0.80	0.75		0 31 48.63	-3.91
29		61 Piscium .....		0 40 26.00	+0.80	0.75		0 40 27.55	-3.96
30		$\phi^3$ Ceti .....		0 48 56.95	+0.81	0.75		0 48 58.51	-4.12
31		25 Ceti .....		0 55 54.26	+0.81	0.75		0 55 55.82	-4.08
32		B.A.C. 320 .....	5	1 0 15.24	+1.00	0.75		1 0 16.99	-7.57
33		B.A.C. 350 .....	5	1 4 12.46	+1.01	+ 0.75		1 4 14.22	-7.86
3. 4. Cloudy. 17. Unsteady.					19. Very unsteady. 32, 33. Cloudy.				

## LAMP WEST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Nov. 9	$\theta^1$ Ceti .....		1 16 58.14	+ 0.82	+ 0.75	+ 0.81	1 16 59.71	- 4.15
2		$\epsilon$ Piscium .....		1 37 56.81	+ 0.81	0.75	+ 0.58	1 37 58.37	- 4.20
3		$\epsilon$ Cassiopeie .....	5	1 44 17.50	+ 0.86	0.74		1 44 19.10	- 5.77
4		56 Andromedæ ...		1 47 47.07	+ 0.82	0.74		1 47 48.63	- 4.57
5		112 Piscium .....		1 52 49.04	+ 0.81	0.74		1 52 50.59	- 4.22
6		Lalande 3825 ...		1 57 24.45	+ 0.82	0.74		1 57 26.01	- 4.77
7		Oeltz. Arg. 2423 .		2 1 25.87	+ 0.82	0.74		2 1 27.43	- 5.16
8		* N.P.D. 34° 40' .	5	2 6 3.14	+ 0.84	0.74		2 6 4.72	- 5.49
9	Nov. 10	65 Pegasi .....	5	23 15 38.08	+ 0.72	0.92		23 15 39.72	- 3.37
10		74 Pegasi .....		23 30 30.22	+ 0.72	0.92		23 30 31.86	- 3.51
11		Rad. 2738 ... S.P.	3	23 36 43.97	- 1.00	0.92	- * 0.18	11 36 43.89	- 2.20
12		21 Piscium .....		23 42 13.31	+ 0.70	0.92		23 42 14.93	- 3.75
13		Groom. 4193 .....	5	23 53 1.00	+ 2.12	0.92	- * 0.13	23 53 4.04	- 6.08
14		39 Piscium .....	5	0 10 30.42	+ 0.71	0.93		0 10 32.06	- 3.78
15		$\delta$ Piscium .....		0 13 19.77	+ 0.72	0.93	+ 1.02	0 13 21.42	- 3.84
16		B.A.C. 98 .....		0 20 10.51	+ 0.72	0.93		0 20 12.16	- 3.83
17		13 Ceti .....		0 27 58.78	+ 0.71	0.93	0.88	0 28 0.42	- 3.98
18		32 Andromedæ ...		0 33 28.20	+ 0.75	0.93	1.03	0 33 29.88	- 3.96
19		64 Piscium .....		0 41 33.72	+ 0.72	0.93		0 41 35.37	- 3.95
20		20 Ceti .....		0 45 47.48	+ 0.71	0.93	0.97	0 45 49.12	- 4.04
21		$\phi^3$ Ceti .....		0 48 56.79	+ 0.70	0.93		0 48 58.42	- 4.10
22		$\epsilon$ Piscium .....		0 55 37.14	+ 0.72	0.93	0.76	0 55 38.79	- 4.03
23		$\beta$ Trianguli .....		2 1 9.14	+ 0.75	0.94		2 1 10.83	- 4.62
24	Nov. 11	74 Pegasi .....		23 30 30.00	+ 0.57	1.20		23 30 31.77	- 3.50
25		Rad. 2738 ... S.P.	3	23 36 44.47	- 1.74	1.20	* 0.33	11 36 43.93	- 2.51
26		$\delta$ Sculptoris .....		23 41 33.72	+ 0.52	1.20		23 41 35.44	- 4.21
27		Groom. 4154 .....	5	23 45 33.02	+ 1.00	1.21		23 45 35.23	- 3.55
28		Groom. 4193 .....	5	23 52 59.90	+ 2.48	1.21	* 0.41	23 53 3.59	- 5.85
29		$\gamma$ Pegasi .....		0 5 57.58	+ 0.57	1.21	1.23	0 5 59.36	- 3.75
30		B.A.C. 47 .....		0 9 24.96	+ 0.54	1.21		0 9 26.71	- 3.85
31		$\delta$ Piscium .....		0 13 19.74	+ 0.55	1.21	1.21	0 13 21.50	- 3.83
32		B.A.C. 81 .....		0 17 16.48	+ 0.55	1.21	1.24	0 17 18.24	- 3.93
33		12 Ceti .....		0 22 49.87	+ 0.55	+ 1.21	+ 1.13	0 22 51.63	- 3.96

November 11. All objects very badly defined.

1, 2. Cloudy.

20—23. Foggy.

LAMP WEST.									
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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Nov. 11	13 Ceti .....		0 27 58.57	+ 0.54	+ 1.21	+ 1.25	0 28 0.32	- 3.97
2		64 Piscium .....	5	0 41 33.47	+ 0.57	1.21		0 41 35.25	- 3.94
3		$\phi^3$ Ceti .....		0 48 56.58	+ 0.53	1.21		0 48 58.32	- 4.09
4		* N.P.D. 30° 39' ..	5	0 54 15.40	+ 0.73	1.22		0 54 17.35	- 4.64
5		$\eta$ Ceti .....		1 1 29.17	+ 0.54	1.22		1 1 30.93	- 4.13
6		38 Ceti .....		1 7 36.68	+ 0.55	1.22		1 7 38.45	- 4.10
7		B.A.C. 509 .....	5	1 33 6.52	+ 0.74	1.22		1 33 8.48	- 5.34
8		Oeltz. Arg. 24628. ..	5	2 3 33.60	+ 0.66	1.23		2 3 35.49	- 5.13
9		67 Ceti .....		2 9 56.74	+ 0.54	1.23		2 9 58.51	- 4.23
10		$\kappa$ Fornacis .....		2 16 5.27	+ 0.53	+ 1.23		2 16 7.03	- 4.26
11	Nov. 17	B.A.C. 191 .....		0 35 50.57	+ 0.72	- 0.05	- 0.08	0 35 51.24	- 3.97
12		$\delta$ 1 L. ....		0 39 33.51	+ 0.73	0.05		0 40 40.41	
13		20 Ceti .....		0 45 48.52	+ 0.71	0.05	0.11	0 45 49.18	- 4.00
14		$\phi^3$ Ceti .....		0 48 57.71	+ 0.70	0.06		0 48 58.35	- 4.07
15		$\epsilon$ Piscium .....		0 55 37.90	+ 0.73	0.06	0.03	0 55 38.57	- 4.01
16		78 Piscium .....		1 0 13.87	+ 0.78	0.06		1 0 14.59	- 4.11
17		$\zeta^1$ Piscium .....		1 6 22.38	+ 0.73	0.06	0.07	1 6 23.05	- 4.07
18		B.A.C. 454 .....		1 24 16.14	+ 0.73	0.06		1 24 16.81	- 4.15
19		B.A.C. 469 .....		1 27 11.95	+ 0.75	0.07		1 27 12.63	- 4.20
20		Groom. 339 .....	3	1 32 27.19	+ 3.12	0.07	* 0.09	1 32 30.24	- 20.13
21		B.A.C. 555 .....		1 41 57.21	+ 0.87	0.07		1 41 58.01	- 4.98
22		$\gamma$ Arietis (South) ..		1 45 48.42	+ 0.75	0.07		1 45 49.10	- 4.30
23		B.A.C. 607 .....		1 51 47.02	+ 0.76	0.07		1 51 47.71	- 4.35
24		54 Cassiopeiae ...	5	1 57 3.78	+ 1.11	0.07		1 57 4.82	- 7.14
25		Groom. 2099 S.P. ..	5	2 4 26.20	- 1.99	0.08	* 0.01	14 4 24.13	+ 19.59
26		$\epsilon$ Ceti .....		2 12 14.07	+ 0.71	0.08	0.03	2 12 14.70	- 4.27
27		B.A.C. 741 .....		2 16 59.31	+ 0.74	0.08		2 16 59.97	- 4.36
28		$\sigma$ Ceti .....		2 25 25.07	+ 0.69	0.08		2 25 25.68	- 4.26
29	Nov. 18	74 Pegasi .....		23 30 31.65	+ 0.68	0.46		23 30 31.87	- 3.44
30		Rad. 2738 ... S.P. ..	5	23 36 47.80	- 1.72	0.46	* 1.01	11 36 45.62	- 4.59
31		Groom. 4154 .....	5	23 45 34.20	+ 1.12	0.46		23 45 34.86	- 3.17
32		B.A.C. 8321 .....	5	23 49 54.70	+ 1.69	0.47		23 49 55.92	- 3.47
33		30 Piscium .....		23 54 44.25	+ 0.65	- 0.47	- 0.44	23 54 44.43	- 3.82
November 17. Light clouds prevalent.									
12. Duration of transit of semi-diameter applied, + 66".22.					23, 26, 27, 28. Cloudy. 31. Orange.				

## LAMP WEST.

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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Nov. 18	38 Piscium (1st)		0 10 9.07	+ 0.67	- 0.47		0 10 9.27	- 3.76
2		2 Piscium .....		0 13 21.06	+ 0.67	0.47	- 0.28	0 13 21.26	- 3.78
3		10 Ceti .....		0 19 24.21	+ 0.66	0.47		0 19 24.40	- 3.88
4		13 Cassiopeie ...	5	0 23 21.26	+ 0.92	0.48		0 23 21.70	- 4.14
5		B.A.C. 154 .....	5	0 29 18.20	+ 1.60	0.48		0 29 19.32	- 6.31
6		Groom. 144 .....	5	0 46 25.20	+ 5.49	0.48	* 0.97	0 46 30.21	- 24.50
7		ε Piscium .....		0 55 38.54	+ 0.67	0.49	0.61	0 55 38.72	- 4.01
8		77 Piscium... (2d)		0 58 34.84	+ 0.66	0.49		0 58 35.01	- 4.03
9		B.A.C. 341 .....		1 2 43.84	+ 0.68	0.49		1 2 44.03	- 4.05
10		38 Cassiopeie ...	5	1 20 49.30	+ 0.98	0.49		1 20 49.79	- 5.93
11		B.A.C. 452 .....		1 23 45.46	+ 0.63	0.49		1 23 45.60	- 4.28
12		B.A.C. 469 .....		1 27 12.50	+ 0.68	0.49		1 27 12.69	- 4.19
13		δ 1 L. ....		1 31 57.20	+ 0.67	0.50		1 33 6.26	
14		ε Sculptoris .....		1 39 3.86	+ 0.64	0.50		1 39 4.00	- 4.28
15		γ Arietis (North)		1 45 48.84	+ 0.68	0.50		1 45 49.02	- 4.30
16		ι Arietis .....		1 49 40.12	+ 0.68	0.50		1 49 40.30	- 4.30
17		α Piscium ... (1st)		1 54 46.08	+ 0.66	0.50		1 54 46.24	- 4.24
18		β Trianguli .....	2	1 10.94	+ 0.73	0.50		2 1 11.17	- 4.63
19		6 Trianguli... (2d)	2	4 13.24	+ 0.71	0.51		2 4 13.44	- 4.57
20		ο Ceti .....	2	12 14.65	+ 0.65	0.51	0.55	2 12 14.79	- 4.27
21		66 Andromedæ ...	2	18 26.68	+ 0.78	0.51	0.64	2 18 26.95	- 5.35
22		τ <sup>3</sup> Eridani .....	2	44 40.10	+ 0.64	0.52	0.48	2 44 40.22	- 4.25
23	Nov. 22	9 Ceti .....		0 15 41.01	+ 0.58	2.23		0 15 39.36	- 3.94
24		10 Ceti .....		0 19 26.14	+ 0.59	2.24		0 19 24.49	- 3.84
25		12 Ceti .....		0 22 53.21	+ 0.58	2.24	2.31	0 22 51.55	- 3.89
26		B.A.C. 132 .....		0 26 18.98	+ 0.59	2.24		0 26 17.33	- 3.87
27		B.A.C. 161 .....		0 30 17.34	+ 0.60	2.24	2.08	0 30 15.70	- 3.87
28		B.A.C. 191 .....		0 35 53.05	+ 0.58	2.24	2.45	0 35 51.39	- 3.94
29		B.A.C. 225 .....	5	0 42 0.36	+ 1.82	2.24		0 41 59.94	- 7.61
30		Groom. 1937 S.P.	3	0 47 59.76	- 1.08	2.24	* 1.17	12 47 56.44	+ 3.00
31		Groom. 1940 S.P.	3	0 48 9.59	- 1.08	2.24	* 3.36	12 48 6.27	+ 3.00
32		ψ <sup>3</sup> Piscium .....	1	0 26.21	+ 0.62	2.25		1 0 24.58	- 4.02
33		ζ <sup>1</sup> Piscium .....	4	1 6 24.73	+ 0.60	2.25	- 2.31	1 6 23.08	- 4.05
34		ζ <sup>2</sup> Piscium .....	5	1 6 26.16	+ 0.60	- 2.25		1 6 24.51	- 4.05
13. Duration of transit of semi-diameter applied, + 68.89.									



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	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Nov. 22	B.A.C. 443 .....	5	1 22 13 <sup>0</sup> 08	+ 0 <sup>9</sup> 5	- 2 <sup>2</sup> 5		1 22 11 <sup>7</sup> 78	- 5 <sup>8</sup> 7
2		Groom. 339 .....	3	1 32 29 <sup>0</sup> 03	+ 2 <sup>9</sup> 7	2 <sup>2</sup> 6	- *2 <sup>4</sup> 3	1 32 29 <sup>7</sup> 74	- 19 <sup>6</sup> 5
3		B.A.C. 544 .....		1 40 23 <sup>0</sup> 03	+ 0 <sup>6</sup> 7	2 <sup>2</sup> 6		1 40 21 <sup>4</sup> 44	- 4 <sup>5</sup> 2
4		B.A.C. 586 .....		1 48 39 <sup>5</sup> 54	+ 0 <sup>5</sup> 9	2 <sup>2</sup> 6		1 48 37 <sup>8</sup> 7	- 4 <sup>2</sup> 2
5		10 Arietis .....		1 55 42 <sup>5</sup> 51	+ 0 <sup>6</sup> 4	2 <sup>2</sup> 7		1 55 40 <sup>8</sup> 88	- 4 <sup>6</sup> 4
6		Oeltz. Arg. 2423 .....	2	1 29 <sup>0</sup> 01	+ 0 <sup>7</sup> 4	2 <sup>2</sup> 7		2 1 27 <sup>4</sup> 48	- 5 <sup>1</sup> 8
7		ε Ceti .....	2	12 16 <sup>3</sup> 37	+ 0 <sup>5</sup> 9	2 <sup>2</sup> 7	2 <sup>2</sup> 0	2 12 14 <sup>6</sup> 69	- 4 <sup>2</sup> 8
8		30 Arietis .....	5	2 28 53 <sup>1</sup> 13	+ 0 <sup>6</sup> 4	2 <sup>2</sup> 7		2 28 51 <sup>5</sup> 50	- 4 <sup>6</sup> 2
9		B.A.C. 797 .....	5	2 28 55 <sup>9</sup> 98	+ 0 <sup>6</sup> 4	2 <sup>2</sup> 7		2 28 54 <sup>3</sup> 35	- 4 <sup>6</sup> 2
10		γ Ceti .....		2 36 2 <sup>8</sup> 7	+ 0 <sup>6</sup> 0	2 <sup>2</sup> 8	2 <sup>3</sup> 4	2 36 1 <sup>1</sup> 19	- 4 <sup>3</sup> 7
11		ρ Persei .....		2 56 12 <sup>0</sup> 08	+ 0 <sup>6</sup> 8	2 <sup>2</sup> 8	2 <sup>1</sup> 8	2 56 10 <sup>4</sup> 48	- 5 <sup>1</sup> 9
12		53 Arietis .....		2 59 32 <sup>6</sup> 69	+ 0 <sup>6</sup> 2	2 <sup>2</sup> 8		2 59 31 <sup>0</sup> 03	- 4 <sup>6</sup> 3
13		δ Arietis .....	3	3 37 <sup>2</sup> 20	+ 0 <sup>6</sup> 2	2 <sup>2</sup> 9	2 <sup>2</sup> 0	3 3 35 <sup>5</sup> 53	- 4 <sup>6</sup> 9
14	Nov. 23	12 Ceti .....		0 22 53 <sup>6</sup> 65	+ 0 <sup>5</sup> 0	2 <sup>6</sup> 8	2 <sup>6</sup> 8	0 22 51 <sup>4</sup> 47	- 3 <sup>8</sup> 8
15		B.A.C. 154 .....	5	0 29 20 <sup>2</sup> 26	+ 2 <sup>0</sup> 3	2 <sup>6</sup> 8		0 29 19 <sup>6</sup> 61	- 5 <sup>9</sup> 0
16		B.A.C. 232 .....	5	0 42 57 <sup>3</sup> 30	+ 0 <sup>7</sup> 6	2 <sup>6</sup> 8		0 42 55 <sup>3</sup> 38	- 4 <sup>0</sup> 8
17		γ Cassiopeie .....	5	0 48 16 <sup>7</sup> 74	+ 0 <sup>8</sup> 6	2 <sup>6</sup> 8		0 48 14 <sup>9</sup> 92	- 4 <sup>3</sup> 9
18		41 Andromedæ ...		0 59 58 <sup>9</sup> 91	+ 0 <sup>6</sup> 9	2 <sup>6</sup> 9	2 <sup>7</sup> 7	0 59 56 <sup>9</sup> 91	- 4 <sup>1</sup> 9
19		θ Ceti .....	1	17 1 <sup>9</sup> 2	+ 0 <sup>5</sup> 0	2 <sup>6</sup> 9	2 <sup>6</sup> 9	1 16 59 <sup>7</sup> 73	- 4 <sup>1</sup> 1
20		η Piscium .....	1	23 59 <sup>6</sup> 64	+ 0 <sup>5</sup> 6	2 <sup>6</sup> 9	2 <sup>7</sup> 0	1 23 57 <sup>5</sup> 51	- 4 <sup>1</sup> 6
21		τ Andromedæ ...	1	32 19 <sup>2</sup> 20	+ 0 <sup>6</sup> 7	2 <sup>7</sup> 0	2 <sup>6</sup> 0	1 32 17 <sup>1</sup> 17	- 4 <sup>5</sup> 0
22		ε Cassiopeie .....	5	1 44 20 <sup>7</sup> 74	+ 0 <sup>9</sup> 1	2 <sup>7</sup> 0		1 44 18 <sup>9</sup> 95	- 5 <sup>7</sup> 0
23		51 Cassiopeie ...	5	1 53 20 <sup>3</sup> 34	+ 1 <sup>2</sup> 5	2 <sup>7</sup> 0		1 53 18 <sup>8</sup> 89	- 7 <sup>6</sup> 8
24		Groom. 2099 S.P. ...	3	2 4 31 <sup>8</sup> 82	- 3 <sup>2</sup> 9	2 <sup>7</sup> 1	*3 <sup>7</sup> 2	14 4 25 <sup>8</sup> 82	+ 19 <sup>1</sup> 6
25		Groom. 595 .....	5	2 59 48 <sup>6</sup> 60	+ 2 <sup>8</sup> 0	- 2 <sup>7</sup> 2	- *3 <sup>6</sup> 7	2 59 48 <sup>6</sup> 68	- 22 <sup>2</sup> 4
26	Dec. 2	δ Andromedæ ...		0 30 52 <sup>3</sup> 31	+ 0 <sup>4</sup> 2	+ 55 <sup>6</sup> 3		0 31 48 <sup>3</sup> 36	- 3 <sup>7</sup> 3
27		β Ceti .....		0 35 35 <sup>5</sup> 54	+ 0 <sup>4</sup> 3	55 <sup>6</sup> 3	+ 55 <sup>6</sup> 7	0 36 31 <sup>6</sup> 60	- 4 <sup>0</sup> 0
28		η <sup>1</sup> Cassiopeie ...	4	0 39 40 <sup>1</sup> 11	+ 0 <sup>4</sup> 7	55 <sup>6</sup> 3		0 40 36 <sup>2</sup> 21	- 3 <sup>9</sup> 8
29		η <sup>2</sup> Cassiopeie ...	5	0 39 41 <sup>0</sup> 04	+ 0 <sup>4</sup> 7	55 <sup>6</sup> 3		0 40 37 <sup>1</sup> 14	- 3 <sup>9</sup> 8
30		β Andromedæ ...	5	1 0 55 <sup>7</sup> 76	+ 0 <sup>4</sup> 3	55 <sup>6</sup> 3		1 1 51 <sup>8</sup> 82	- 4 <sup>0</sup> 4
31		B.A.C. 351 .....	1	3 10 <sup>8</sup> 83	+ 0 <sup>4</sup> 2	55 <sup>6</sup> 3		1 4 6 <sup>8</sup> 88	- 3 <sup>9</sup> 9
32		B.A.C. 378 .....	5	1 7 47 <sup>3</sup> 38	+ 0 <sup>6</sup> 3	55 <sup>6</sup> 3		1 8 43 <sup>6</sup> 64	- 6 <sup>2</sup> 6
33		Groom. 307 .....	5	1 16 56 <sup>1</sup> 10	+ 0 <sup>5</sup> 7	+ 55 <sup>6</sup> 3		1 17 52 <sup>3</sup> 30	- 6 <sup>0</sup> 6
December 2. The clock was put backward one minute.									
7. Very red. 8—13. Foggy. 14. Woolly. 15—18. Thick fog.					19. Faint. 20—22. Very unsteady. 23, 24. Faint and unsteady. 25. Hazy.				

LAMP WEST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Dec. 2	B.A.C. 444 .....	5	1 21 19.94	+ 0.52	+55.63		1 22 16.09	- 5.45
2		50 Andromedæ ...	5	1 27 37.04	+ 0.44	55.63		1 28 33.11	- 4.42
3		42 Cassiopeizæ ...	5	1 31 9.26	+ 0.53	55.63		1 32 5.42	- 5.99
4		B.A.C. 545 .....	5	1 39 55.60	+ 0.64	55.63		1 40 51.87	- 8.03
5		7 <sup>3</sup> Eridani .....		2 43 44.21	+ 0.44	55.63	+ 55.63	2 44 40.28	- 4.27
6		ε Arietis .....		2 50 14.71	+ 0.42	55.63		2 51 10.76	- 4.72
7		α Ceti .....		2 54 0.01	+ 0.42	55.63	55.66	2 54 56.06	- 4.46
8		Groom. 595 .....	5	2 58 50.80	+ 1.00	55.63	*55.74	2 59 47.43	- 21.93
9		95 Ceti .....		3 10 15.07	+ 0.42	55.63	55.66	3 11 11.12	- 4.53
10		64 Arietis .....		3 15 4.71	+ 0.42	55.63	55.54	3 16 0.76	- 4.92
11		Groom. 2283 S.P. ...	5	3 23 6.30	- 1.29	55.63	*55.84	3 24 0.64	+ 48.96
12		B.A.C. 1222 .....		3 47 33.89	+ 0.44	55.63		3 48 29.96	- 4.24
13		A <sup>1</sup> Tauri .....		3 55 27.44	+ 0.43	55.63	55.60	3 56 23.50	- 5.02
14	Dec. 4	7 <sup>3</sup> Cassiopeizæ ...	5	0 39 40.96	+ 0.45	55.66		0 40 37.07	- 3.95
15		* N.P.D. 30° 39' ...	5	0 53 20.86	+ 0.45	55.66		0 54 16.97	- 4.26
16		ψ <sup>1</sup> Piscium (1st) ...	4	0 57 12.18	+ 0.49	55.66		0 58 8.33	- 3.94
17		ψ <sup>1</sup> Piscium... (2d) ...	5	0 57 13.12	+ 0.49	55.66		0 58 9.27	- 3.94
18		θ Cassiopeizæ .....	5	1 1 37.06	+ 0.45	55.66		1 2 33.17	- 4.32
19		ζ <sup>1</sup> Piscium .....	5	1 5 26.94	+ 0.50	55.66	55.51	1 6 23.10	- 3.98
20		ζ <sup>3</sup> Piscium .....	4	1 5 28.35	+ 0.50	55.66		1 6 24.51	- 3.98
21		Groom. 2007 S.P. ...	5	1 19 28.90	+ 0.56	55.66	*55.99	1 20 25.12	+ 6.95
22		B.A.C. 490 .....		1 29 15.70	+ 0.50	55.66		1 30 11.86	- 4.13
23		B.A.C. 514 .....		1 32 46.41	+ 0.48	55.66		1 33 42.55	- 4.28
24		Lalande 3259 ...		1 38 48.10	+ 0.49	55.66		1 39 44.25	- 4.26
25		α Trianguli .....		1 44 8.01	+ 0.48	55.66	55.66	1 45 4.15	- 4.37
26		Groom. 410 .....	5	1 48 17.44	+ 0.41	55.66		1 49 13.51	- 7.52
27		α Arietis .....		1 58 18.71	+ 0.49	55.66	55.78	1 59 14.86	- 4.44
28		16 Arietis .....	2	2 16.10	+ 0.49	55.66		2 3 12.25	- 4.48
29		20 Arietis .....	2	6 47.10	+ 0.49	55.66		2 7 43.25	- 4.51
30		ε Ceti .....		2 11 18.61	+ 0.52	55.66	55.61	2 12 14.79	- 4.26
31		ν Ceti .....		2 27 33.75	+ 0.51	55.66	55.62	2 28 29.92	- 4.38
32		B.A.C. 908 .....	5	2 49 17.50	+ 0.38	55.66		2 50 13.54	- 14.21
33		Groom. 595 .....	3	2 58 51.18	+ 0.33	55.66	*55.94	2 59 47.17	- 21.89
34		δ Persei .....		3 31 59.58	+ 0.45	+55.66	+ 55.76	3 32 55.69	- 6.01

12. Faint.

27, 31, 32, 33. Cloudy.

LAMP WEST.									
No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Dec. 18	$\epsilon$ Ceti.....		2 11 22.45	+ 0.51	+ 51.66	+ 51.72	2 12 14.62	- 4.20
2		B.A.C. 743 .....		2 16 15.04	+ 0.55	51.66		2 17 7.25	- 4.12
3		$\nu$ Ceti.....		2 27 37.74	+ 0.51	51.66	51.59	2 28 29.91	- 4.34
4		$\gamma$ Ceti .....	6	2 35 8.98	+ 0.51	51.66	51.62	2 36 1.15	- 4.35
5		B.A.C. 908 .....	5	2 49 20.96	+ 0.64	51.65		2 50 13.25	- 13.56
6		Groom. 595 .....	5	2 58 54.40	+ 0.76	51.65	* 51.27	2 59 46.81	- 20.86
7		$\kappa^1$ Ceti .....		3 11 7.25	+ 0.51	51.65		3 11 59.41	- 4.52
8		Groom. 2283 S.P. .....	5	3 23 12.80	- 0.37	51.65	* 51.21	15 24 4.08	+ 46.26
9		27 Tauri .....		3 39 56.44	+ 0.50	51.64	51.65	3 40 48.58	- 5.09
10		* N.P.D. 70° 29' .....		3 57 13.67	+ 0.50	51.64		3 58 5.81	- 5.08
11		$\delta$ L. ....		4 1 21.84	+ 0.50	51.64		4 3 31.08	
12		B.A.C. 1342 .....		4 13 14.95	+ 0.51	51.64		4 14 7.10	- 5.17
13		$\nu^1$ Tauri.....		4 17 2.07	+ 0.51	51.64		4 17 54.22	- 5.25
14		$\tau^3$ Tauri .....		4 32 56.71	+ 0.51	51.63	51.65	4 33 48.85	- 5.32
15		B.A.C. 1471 .....		4 37 44.72	+ 0.55	51.63		4 38 36.90	- 4.25
16	Dec. 22	95 Ceti .....		3 10 20.01	+ 0.55	50.63	50.51	3 11 11.19	- 4.45
17		Groom. 642 .....	4	3 20 4.45	+ 0.37	50.63	* 49.40	3 20 55.45	- 31.63
18		Groom. 2283 S.P. .....	4	3 23 14.71	+ 0.43	50.63	* 49.51	15 24 5.77	+ 45.22
19		$\delta$ Persei .....		3 32 4.68	+ 0.49	50.62	50.62	3 32 55.79	- 6.01
20		27 Tauri .....		3 39 57.35	+ 0.52	50.62	50.72	3 40 48.49	- 5.09
21		B.A.C. 1342 .....		4 13 16.00	+ 0.53	50.62		4 14 7.15	- 5.19
22		$\delta$ Tauri .....		4 20 6.91	+ 0.53	50.61		4 20 58.05	- 4.99
23		Aldebaran .....		4 27 0.50	+ 0.53	50.61	50.63	4 27 51.64	- 5.12
24		$\tau^1$ Tauri .....		4 32 55.32	+ 0.52	50.61	50.63	4 33 46.45	- 5.34
25		$\lambda$ Orionis .....		5 0 44.92	+ 0.54	50.61		5 1 36.07	- 4.99
26	Dec. 29	$\gamma$ Ceti .....		2 35 12.04	+ 0.45	48.68	48.56	2 36 1.17	- 4.29
27		$\tau^3$ Eridani .....		2 43 50.91	+ 0.48	48.68	48.73	2 44 40.07	- 4.11
28		47 Arietis .....		2 49 13.41	+ 0.44	48.68		2 50 2.53	- 4.63
29		$\rho$ Persei .....		2 55 21.25	+ 0.45	48.68	48.83	2 56 10.38	- 5.14
30		$\delta$ Arietis .....		3 2 46.58	+ 0.44	48.68	48.64	3 3 35.70	- 4.73
31		Groom. 642 .....	4	3 20 4.70	+ 0.97	48.67	* 47.42	3 20 54.34	- 30.46
32		Groom. 2283 S.P. .....	4	3 23 19.58	- 0.62	48.67	* 47.44	15 24 7.63	+ 43.41
33		27 Tauri .....		3 39 59.38	+ 0.45	+ 48.67	+ 48.75	3 40 48.50	- 5.08
2. Scarcely visible.				12. Pale red.					
3, 4. Cloudy.				15—24. Cloudy.					
11. Duration of transit of semi-diameter applied, + 77.10.				21. Pale red.					

## LAMP WEST.

No. for Ref.	Day of Observation.	Name of Object.	Num. of Wires.	Observed Transit reduced to the Mean of the Wires.	Sum of Instrumental Corrections.	Clock Correction applied.	Clock Correction as deduced from each Star.	Observed Apparent R.A. of Centre of Object.	Cor. to Mean R.A. 1858, Jan. 1.
	1858.			h. m. s.	s.	s.	s.	h. m. s.	s.
1	Dec. 29	B.A.C. 1273 .....		3 59 1'34	+ 0'49	+48'66		3 59 50'49	-4'20
2		B.A.C. 1471 .....		4 37 47'75	+ 0'49	48'66		4 38 36'90	-4'24
3		(R) Leporis .....		4 52 24'00	+ 0'46	48'65	+ 48'59	4 53 13'11	-4'49
4		$\lambda$ Orionis .....		5 0 46'99	+ 0'45	48'65		5 1 36'09	-5'06
5		Rigel .....		5 6 58'48	+ 0'46	48'65	+ 48'59	5 7 47'59	-4'63
6		B.A.C. 1678 .....		5 15 53'98	+ 0'46	48'65		5 16 43'09	-4'85
7		$\theta^1$ Orionis... (3rd)		5 27 33'85	+ 0'46	+48'65		5 28 22'96	-4'74

# LIST OF STARS

USED IN 1858,

FOR OBTAINING THE CLOCK AND AZIMUTHAL ERRORS;

SHOWING THEIR ADOPTED MEAN RIGHT ASCENSIONS AND APPROXIMATE  
NORTH POLAR DISTANCES.

No.	Name of Star.	Mean R.A. 1858, Jan. 1.	Approximate N.P.D.	Number of Obs.	No.	Name of Star.	Mean R.A. 1858, Jan. 1.	Approximate N.P.D.	Number of Obs.
		h. m. s.	° ' "				h. m. s.	° ' "	
1	6 Ceti .....	0 4 2'12	106 15	4	26	τ Andromedæ.	1 32 12'77	50 9	6
2	γ Pegasi .....	0 5 55'63	75 36	43	27	ο Piscium .....	1 37 54'00	81 34	12
3	δ Piscium .....	0 13 17'67	82 36	5	28	Lalande 3405 .	1 44 16'03	66 35	3
4	B.A.C. 81 .....	0 17 14'34	93 0	3	29	α Trianguli ...	1 44 59'78	61 7	4
5	45 Piscium ...	0 18 22'78	83 6	2	30	β Arietis .....	1 46 48'15	69 53	12
6	Groom. 67 ...	0 22 42'39	4 28	26	31	γ <sup>3</sup> Andromedæ	1 55 12'71	48 21	3
7	12 Ceti .....	0 22 47'59	94 45	3	32	α Arietis .....	1 59 10'54	67 13	43
8	52 Piscium ...	0 25 9'37	70 29	2	33	58 Andromedæ	1 59 55'75	52 49	3
9	13 Ceti .....	0 27 56'39	94 23	5	34	Radcliffe 606 .	1 59 57'84	1 56	10
10	B.A.C. 161 ...	0 30 11'99	87 40	3	35	ο Ceti .....	2 12 10'48	93 37	5
11	32 Andromedæ	0 33 26'02	51 19	6	36	66 Andromedæ	2 18 21'47	40 4	4
12	B.A.C. 191 ...	0 35 47'24	94 38	3	37	Radcliffe 693 .	2 18 34'61	1 38	10
13	β Ceti .....	0 36 27'64	108 46	6	38	ν Ceti .....	2 28 25'50	85 2	11
14	φ <sup>1</sup> Ceti .....	0 37 1'71	101 23	3	39	Radcliffe 756 .	2 31 33'06	4 43	10
15	δ Piscium .....	0 41 19'09	83 11	20	40	γ Ceti .....	2 35 56'76	87 22	19
16	20 Ceti .....	0 45 45'12	91 55	8	41	τ <sup>3</sup> Eridani ...	2 44 36'01	111 35	4
17	Groom. 144 ...	0 46 5'06	1 44	81	42	α Ceti .....	2 54 51'63	86 28	35
18	2 Ursæ Minoris	0 50 3'27	4 30	26	43	ρ Persei .....	2 56 5'39	51 43	9
19	ε Piscium .....	0 55 34'59	82 53	16	44	ι Persei .....	2 58 50'38	40 56	4
20	41 Andromedæ	0 59 52'64	46 49	11	45	Groom. 595 ...	2 59 25'55	5 36	25
21	ζ <sup>1</sup> Piscium ...	1 6 18'97	83 11	2	46	δ Arietis .....	3 3 30'93	70 49	19
22	θ <sup>1</sup> Ceti .....	1 16 55'62	98 55	14	47	95 Ceti .....	3 11 6'62	91 27	3
23	η Piscium ...	1 23 53'34	75 23	10	48	64 Arietis .....	3 15 55'75	65 47	4
24	Radcliffe 467 .	1 27 52'66	5 30	10	49	Groom. 642 ...	3 20 22'54	3 49	55
25	Groom. 339 ...	1 32 10'00	3 46	30	50	δ Persei .....	3 32 49'78	42 40	12

No.	Name of Star.	Mean R.A. 1858, Jan. 1.	Approximate N.P.D.	Number of Obs.	No.	Name of Star.	Mean R.A. 1858, Jan. 1.	Approximate N.P.D.	Number of Obs.
		<i>h. m. s.</i>	<i>° ' "</i>				<i>h. m. s.</i>	<i>° ' "</i>	
51	27 Tauri .....	3 40 43.50	66 23	5	91	ζ Tauri.....	5 29 9.61	68 57	3
52	30 Eridani ...	3 45 40.88	95 47	5	92	α Columbe ...	5 34 30.70	124 9	3
53	B.A.C. 1229...	3 49 51.01	104 1	3	93	ο Aurigæ .....	5 34 54.30	40 14	8
54	λ Tauri .....	3 52 49.01	77 55	3	94	Lalande 10912	5 39 14.75	65 24	3
55	Groom. 750 ...	3 53 14.57	4 50	50	95	κ Orionis .....	5 41 1.45	99 43	3
56	ν Tauri.....	3 55 36.33	84 24	5	96	137 Tauri.....	5 44 18.36	75 52	3
57	Α <sup>1</sup> Tauri .....	3 56 18.45	68 19	3	97	α Orionis .....	5 47 29.17	82 37	25
58	ω <sup>1</sup> Tauri .....	4 0 53.86	70 46	3	98	Groom. 1004 .	5 49 20.68	3 14	66
59	B.A.C. 1347...	4 14 55.80	65 56	4	99	η Leporis.....	5 49 56.33	104 12	3
60	δ <sup>2</sup> Tauri .....	4 15 54.81	72 53	4	100	59 Orionis ...	5 51 2.05	88 11	2
61	Aldebaran ...	4 27 46.54	73 47	54	101	38 Aurigæ ...	5 53 3.83	47 5	8
62	σ <sup>3</sup> Tauri .....	4 31 9.39	74 22	5	102	66 Orionis ...	5 57 28.21	85 50	2
63	Radcliffe 1272	4 31 11.99	3 56	10	103	2 Geminorum.	5 58 9.33	66 21	4
64	τ <sup>1</sup> Tauri .....	4 33 41.13	67 20	3	104	η Geminorum.	6 6 18.39	67 27	18
65	τ <sup>2</sup> Tauri .....	4 33 43.55	67 19	5	105	κ Aurigæ .....	6 6 19.81	60 27	5
66	μ Eridani.....	4 38 24.24	93 31	4	106	71 Orionis ...	6 6 29.64	70 48	4
67	Piazzi iv. 189 .	4 39 43.67	84 28	3	107	72 Orionis ...	6 7 13.98	73 49	4
68	58 Eridani ...	4 41 13.81	107 12	3	108	43 Aurigæ ...	6 7 41.53	43 35	5
69	Radcliffe 1311	4 42 0.16	4 14	10	109	5 Monocerotis.	6 7 55.85	96 14	4
70	π <sup>1</sup> Orionis ...	4 42 7.93	83 17	2	110	75 Orionis ...	6 9 16.93	80 1	2
71	Radcliffe 1329	4 46 5.70	4 27	10	111	μ Geminorum.	6 14 22.22	67 25	48
72	ε Aurigæ .....	4 47 45.04	57 4	2	112	β Canis Maj. .	6 16 26.97	107 53	2
73	ε Aurigæ .....	4 51 47.24	46 23	4	113	78 Orionis ...	6 20 0.15	90 12	3
74	* .....	4 52 8.20	105 0	2	114	ν Geminorum.	6 20 31.99	69 42	4
75	(R) Leporis ...	4 53 8.56	105 1	3	115	B.A.C. 2147...	6 27 20.41	121 56	2
76	Radcliffe 1377	4 56 2.92	4 28	25	116	ξ <sup>2</sup> Canis Maj..	6 29 6.42	112 51	3
77	ι Leporis .....	4 56 45.54	113 0	2	117	γ Geminorum.	6 29 30.50	73 29	12
78	ε Leporis .....	4 59 27.13	112 34	2	118	51 Cep. (Hev.)	6 32 38.65	2 45	189
79	13 Orionis ...	4 59 51.60	80 42	2	119	ε Geminorum .	6 35 11.75	64 44	5
80	β Eridani.....	5 0 52.28	95 16	2	120	56 Aurigæ (1st)	6 36 30.01	46 17	6
81	λ Eridani.....	5 2 21.34	98 56	3	121	56 Aurigæ (2d)	6 36 31.53	46 16	5
82	Capella.....	5 6 12.27	44 9	18	122	ξ Geminorum.	6 37 19.12	76 57	5
83	μ Leporis.....	5 6 33.25	106 22	3	123	Sirius .....	6 38 53.47	106 31	11
84	Rigel .....	5 7 42.90	98 22	9	124	B.A.C. 2217...	6 39 51.70	110 38	1
85	λ Aurigæ .....	5 9 9.32	50 2	7	125	58 Aurigæ ...	6 40 43.25	48 3	6
86	B.A.C. 1661...	5 14 37.66	86 34	2	126	59 Aurigæ ...	6 43 15.16	50 58	7
87	111 Tauri.....	5 16 8.42	72 45	2	127	38 Geminorum	6 46 38.05	76 39	4
88	Groom. 956 ...	5 21 20.92	4 46	27	128	62 Aurigæ ...	6 49 22.15	51 45	11
89	Radcliffe 1474	5 23 37.48	2 42	12	129	39 Geminorum	6 50 2.27	63 44	3
90	θ <sup>1</sup> Orionis (4th)	5 28 18.90	95 29	2	130	ε Canis Majoris	6 53 2.73	118 47	4

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		<i>h. m. s.</i>	<i>° ' "</i>				<i>h. m. s.</i>	<i>° ' "</i>	
131	ζ Geminorum.	6 55 41.17	69 13	26	171	Radcliffe 2198	8 37 43.51	4 45	8
132	22 Canis Maj..	6 56 3.79	117 44	2	172	ε Hydræ .....	8 39 15.32	83 4	60
133	γ Canis Maj. .	6 57 20.17	105 26	4	173	ρ <sup>1</sup> Cancr. ....	8 43 55.99	61 13	2
134	B.A.C. 2331...	7 0 16.34	59 38	3	174	ρ <sup>2</sup> Cancr. ....	8 44 8.00	61 8	2
135	(R) Canis Min.	7 0 53.92	79 45	3	175	B.A.C. 3025...	8 47 12.19	43 49	5
136	τ Geminorum.	7 2 5.91	59 31	3	176	ι Ursæ Majoris	8 49 28.08	41 24	23
137	Groom. 1119 .	7 7 33.71	0 58	3	177	B.A.C. 3104...	8 58 28.56	74 10	6
138	B.A.C. 2383...	7 8 15.50	63 3	2	178	ξ Cancr. ....	9 1 11.34	67 23	4
139	λ Geminorum.	7 9 55.87	73 12	3	179	π <sup>1</sup> Cancr. ....	9 4 31.09	74 26	4
140	δ Geminorum.	7 11 38.39	67 46	55	180	B.A.C. 3144...	9 6 30.58	54 47	4
141	B.A.C. 2443...	7 16 45.57	122 19	3	181	83 Cancr. ....	9 11 3.10	71 42	9
142	ι Geminorum .	7 16 54.25	61 55	2	182	Radcliffe 2295	9 11 3.46	2 15	34
143	B.A.C. 2453...	7 18 8.39	120 10	3	183	Radcliffe 2320	9 15 46.31	5 32	10
144	22 Lyncis.....	7 19 8.21	40 2	5	184	41 Lyncis.....	9 19 20.51	43 47	5
145	B.A.C. 2466...	7 20 15.99	121 28	3	185	Radcliffe 2343	9 22 49.04	5 34	10
146	α <sup>1</sup> Geminorum	7 25 31.63	57 48	9	186	Radcliffe 2346	9 23 35.86	5 37	10
147	Castor .....	7 25 32.08	57 48	43	187	Radcliffe 2350	9 24 21.75	5 38	10
148	B.A.C. 2489...	7 26 7.01	58 44	3	188	Radcliffe 2368	9 30 54.08	2 45	7
149	ν Geminorum.	7 27 10.17	62 47	3	189	12 Leonis.....	9 31 2.65	64 0	8
150	70 Geminorum	7 29 13.40	54 38	2	190	ι Hydræ .....	9 32 36.21	90 30	5
151	Radcliffe 1979	7 29 57.76	3 14	11	191	14 Leonis Min.	9 37 36.33	44 14	4
152	Procyon .....	7 31 52.09	84 25	40	192	(R) Leonis ...	9 39 55.12	77 55	3
153	Pollux .....	7 36 37.32	61 38	54	193	μ Leonis .....	9 44 40.87	63 19	6
154	Radcliffe 2020	7 38 11.86	3 54	19	194	Radcliffe 2404	9 45 13.03	5 24	13
155	Groom. 1359 .	7 42 22.56	5 33	40	195	π Leonis .....	9 52 42.51	81 16	8
156	B.A.C. 2599...	7 43 3.86	114 33	3	196	Regulus .....	10 0 48.32	77 20	62
157	Radcliffe 2056	7 51 26.31	5 34	12	197	23 Leonis Min.	10 8 9.99	59 59	3
158	B.A.C. 2673...	7 54 52.57	87 17	6	198	Groom. 1620 .	10 8 20.50	5 0	72
159	ψ <sup>2</sup> Cancr. ....	8 1 53.72	64 4	6	199	λ Ursæ Maj. .	10 8 31.23	46 23	6
160	ζ <sup>1</sup> Cancr. ....	8 4 3.90	71 56	7	200	42 Leonis.....	10 14 11.98	74 19	6
161	ζ <sup>2</sup> Cancr. ....	8 4 4.19	71 56	3	201	30 Leonis Min.	10 17 45.91	55 29	5
162	*	8 4 55.29	73 4	2	202	B.A.C. 3566...	10 19 10.39	95 42	3
163	Radcliffe 2099	8 5 53.98	3 44	10	203	B.A.C. 3627...	10 28 12.41	112 26	2
164	(R) Cancr. ...	8 8 43.95	77 50	5	204	B.A.C. 3628...	10 28 39.67	82 13	4
165	Groom. 1418 .	8 13 34.14	4 27	77	205	Radcliffe 2560	10 41 5.64	4 53	10
166	B.A.C. 2827...	8 18 56.12	113 35	4	206	ι Leonis .....	10 41 47.53	78 42	5
167	B.A.C. 2828...	8 18 59.14	113 35	4	207	α Crateris.....	10 52 51.56	107 33	2
168	η Cancr. ....	8 24 29.59	69 5	7	208	χ Leonis .....	10 57 41.49	81 54	15
169	Radcliffe 2162	8 25 48.31	5 36	10	209	β Crateris ...	11 4 40.82	112 3	6
170	Radcliffe 2189	8 34 36.57	3 54	14	210	75 Leonis.....	11 9 58.96	87 12	3

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		h. m. s.	° ' "				h. m. s.	° ' "	
211	B.A.C. 3863...	11 14 8.55	82 35	4	251	$\epsilon$ Virginis.....	13 9 43.65	79 50	3
212	$\epsilon$ Leonis .....	11 16 31.29	78 41	12	252	61 Virginis ...	13 10 59.10	107 31	6
213	$\epsilon$ Crateris .....	11 17 26.49	100 5	4	253	B.A.C. 4462...	13 13 23.62	84 26	2
214	$\tau$ Leonis .....	11 20 38.08	86 22	16	254	B.A.C. 4473...	13 15 8.88	95 27	7
215	58 Ursæ Maj..	11 22 49.49	46 3	5	255	66 Virginis ...	13 17 9.96	94 25	3
216	89 Leonis .....	11 27 5.93	86 9	6	256	Spica .....	13 17 43.06	100 25	70
217	$\nu$ Leonis .....	11 29 48.86	90 2	7	257	Groom. 2007 .	13 20 32.36	4 30	29
218	59 Ursæ Maj..	11 30 45.86	45 35	7	258	B.A.C. 4496...	13 20 59.81	90 5	3
219	Radcliffe 2738	11 36 40.52	3 41	10	259	(R) Hydræ ...	13 21 57.76	112 30	3
220	$\beta$ Leonis .....	11 41 48.91	74 38	35	260	$\zeta$ Virginis.....	13 27 27.62	89 52	4
221	$\delta$ Virginis .....	11 52 40.69	85 33	3	261	24 Can. Venat.	13 28 38.90	40 15	6
222	B.A.C. 4064...	11 56 29.59	83 39	3	262	Radcliffe 3075	13 35 30.07	4 0	10
223	Groom. 1850 .	11 57 32.03	3 38	44	263	85 Virginis ...	13 37 56.62	105 3	3
224	$\alpha$ Corvi.....	12 1 5.71	113 56	2	264	$\eta$ Ursæ Maj. .	13 41 56.51	39 59	16
225	10 Virginis ...	12 2 24.87	87 18	2	265	B.A.C. 4628...	13 44 53.22	54 38	3
226	B.A.C. 4119...	12 6 59.04	94 56	2	266	$\eta$ Boötis .....	13 47 55.48	70 53	26
227	$\eta$ Virginis.....	12 12 38.65	89 52	25	267	Lalande 25653	13 49 52.57	57 16	2
228	Groom. 1871 .	12 12 41.12	2 46	44	268	$\tau$ Virginis.....	13 54 25.52	87 46	3
229	Groom. 1884 .	12 14 21.44	1 31	82	269	B.A.C. 4682...	13 57 30.14	105 39	3
230	Groom. 1889 .	12 18 6.74	5 34	10	270	Groom. 2099 .	14 4 43.88	3 34	20
231	Groom. 1892 .	12 19 23.22	5 47	10	271	97 Virginis ...	14 4 59.64	99 14	3
232	$\gamma$ Can. Venat..	12 23 19.38	37 41	5	272	Arcturus .....	14 9 11.18	70 4	40
233	$\epsilon$ Virginis .....	12 26 27.31	98 40	5	273	2 Libræ .....	14 15 47.55	101 4	2
234	$\chi$ Virginis.....	12 31 55.21	97 13	3	274	$\rho$ Boötis .....	14 25 42.60	59 0	2
235	$\gamma$ Virginis (S)	12 34 28.12	90 40	10	275	Radcliffe 3250	14 31 30.29	1 56	9
236	Groom. 1923 .	12 37 16.55	5 35	10	276	$\epsilon$ Boötis .....	14 38 47.18	62 20	46
237	38 Virginis ...	12 45 55.05	92 47	4	277	$\alpha^3$ Libræ .....	14 43 1.84	105 27	16
238	$\psi$ Virginis ...	12 46 58.47	98 46	3	278	$\zeta^3$ Libræ .....	14 49 4.16	100 50	7
239	Groom. 1937 .	12 48 0.45	5 49	22	279	*	14 55 11.05	99 50	3
240	Groom. 1940 .	12 48 8.09	5 50	17	280	20 Libræ .....	14 55 46.07	114 43	2
241	$\delta$ Virginis .....	12 48 27.19	85 50	9	281	$\beta$ Boötis .....	14 56 35.91	49 3	4
242	12 Can. Ven. (1)	12 49 21.64	50 55	3	282	$\lambda$ Boötis .....	15 0 43.71	41 18	6
243	12 Can. Ven. (2)	12 49 22.85	50 55	30	283	$\iota^1$ Libræ .....	15 4 8.08	109 15	5
244	B.A.C. 4348(1)	12 50 3.45	35 8	3	284	23 Libræ .....	15 5 11.19	114 46	3
245	$\epsilon$ Virginis .....	12 55 6.55	78 16	2	285	Groom. 2213 .	15 6 26.04	5 30	15
246	$\theta$ Virginis.....	13 0 27.82	99 59	6	286	$\delta$ Boötis .....	15 9 46.94	56 9	2
247	Radcliffe 2967	13 1 37.10	3 21	19	287	5 Serpentinis ...	15 12 3.94	87 42	2
248	$\theta$ Virginis.....	13 2 36.17	94 47	14	288	Radcliffe 3354	15 12 13.07	5 25	10
249	$\alpha$ Comæ .....	13 3 4.88	71 43	3	289	Radcliffe 3362	15 14 1.70	3 57	10
250	18 Can. Venat.	13 5 1.54	48 27	6	290	B.A.C. 5064...	15 15 2.46	39 16	4



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		h. m. s.	° ' "				h. m. s.	° ' "	
291	$\mu$ Boötis .....	15 19 7.61	52 7	2	331	$\xi$ Ophiuchi ...	17 12 29.85	110 57	8
292	$\zeta^1$ Libræ .....	15 20 15.32	106 13	5	332	$\theta$ Ophiuchi ...	17 13 17.55	114 51	10
293	Groom. 2283 .....	15 24 49.92	2 14	50	333	Radcliffe 3750	17 16 21.96	0 42	12
294	$\delta^2$ Serpentis...	15 28 1.38	78 59	2	334	$\delta$ Ophiuchi ...	17 17 42.19	114 2	4
295	41 Libræ .....	15 30 44.33	108 50	4	335	B.A.C. 5895...	17 19 32.12	52 55	2
296	42 Libræ .....	15 31 53.70	113 21	3	336	$\epsilon$ Herculis.....	17 35 27.45	43 55	7
297	$\kappa$ Libræ .....	15 33 46.25	109 13	2	337	$\mu$ Herculis ...	17 40 54.19	62 11	9
298	$\zeta^2$ Coronæ ...	15 34 2.03	52 54	2	338	87 Herculis ...	17 43 3.71	64 19	3
299	$\alpha$ Serpentis ...	15 37 16.60	83 7	31	339	30 Draconis...	17 45 40.82	39 11	5
300	$\delta$ Scorpii .....	15 42 26.82	115 19	4	340	63 Ophiuchi...	17 46 9.85	114 51	3
301	(R) Coronæ ...	15 42 43.58	61 24	5	341	Radcliffe 3796	17 47 28.97	3 2	10
302	$\theta$ Libræ .....	15 45 44.84	106 19	5	342	Radcliffe 3798	17 48 2.10	3 2	10
303	$\kappa$ Coronæ.....	15 45 52.97	53 54	4	343	B.A.C. 6065...	17 48 9.02	105 47	3
304	$\chi$ Herculis ...	15 47 46.03	47 9	5	344	5 Sagittarii ...	17 51 29.38	114 16	3
305	Radcliffe 3475	15 49 43.38	4 43	13	345	$\xi$ Herculis ...	17 52 14.90	60 44	3
306	$\delta$ Scorpii .....	15 51 56.61	112 13	7	346	$\zeta$ Serpentis ...	17 52 59.01	93 41	3
307	$\beta^1$ Scorpii ...	15 57 11.20	109 25	18	347	70 Ophiuchi(1)	17 58 16.78	87 28	3
308	$\beta^2$ Scorpii ...	15 57 11.54	109 25	4	348	$\delta$ Sagittarii ...	18 11 54.30	119 53	3
309	B.A.C. 5346...	15 59 24.56	117 20	2	349	$\eta$ Serpentis ...	18 13 57.77	92 56	5
310	14 Herculis ...	16 5 48.18	45 48	3	350	108 Herculis .	18 15 29.04	60 12	3
311	Radcliffe 3522	16 6 36.59	5 59	16	351	B.A.C. 6245...	18 16 32.70	72 15	4
312	$\delta$ Ophiuchi ...	16 6 54.48	93 19	16	352	Radcliffe 3921	18 17 23.04	4 20	10
313	$\gamma$ Herculis ...	16 15 39.47	70 31	17	353	109 Herculis .	18 17 38.83	68 17	4
314	B.A.C. 5465...	16 15 46.73	116 49	3	354	$\delta$ Ursæ Minoris	18 18 9.42	3 24	338
315	$\psi$ Ophiuchi ...	16 15 47.96	109 42	6	355	$\lambda$ Sagittarii ...	18 19 12.47	115 30	8
316	Antares .....	16 20 42.45	116 7	17	356	B.A.C. 6292...	18 22 59.25	109 0	6
317	$\tau$ Scorpii .....	16 27 2.94	117 55	6	357	24 Ursæ Min.	18 23 19.92	3 1	35
318	B.A.C. 5579...	16 33 21.92	107 28	4	358	25 Sagittarii...	18 25 51.59	114 20	3
319	B.A.C. 5595...	16 35 5.70	116 32	2	359	1 Aquilæ .....	18 27 28.78	98 20	5
320	25 Scorpii ...	16 38 10.07	115 16	4	360	B.A.C. 6347...	18 30 25.52	111 10	2
321	$\kappa$ Ophiuchi ...	16 50 56.93	80 24	8	361	$\alpha$ Lyræ.....	18 32 7.84	51 21	19
322	B.A.C. 5709...	16 51 16.46	114 52	4	362	$\phi$ Sagittarii ...	18 36 46.98	117 8	5
323	$\epsilon$ Herculis ...	16 54 51.50	58 52	36	363	Radcliffe 4069	18 39 15.01	3 30	10
324	$\iota$ Ophiuchi ...	16 57 26.05	76 13	2	364	$\nu^1$ Lyræ .....	18 44 28.85	57 21	4
325	$c$ Herculis ...	16 58 24.47	54 23	2	365	$\nu^2$ Lyræ .....	18 44 34.86	57 37	3
326	(R) Ophiuchi .	16 59 36.88	105 54	3	366	$\beta^1$ Lyræ .....	18 44 50.25	56 49	50
327	$A^1$ Ophiuchi...	17 6 37.20	116 23	5	367	$\beta^2$ Lyræ .....	18 44 52.20	56.48	5
328	Radcliffe 3685	17 6 45.32	5 6	20	368	13 Lyræ .....	18 51 0.83	46 14	11
329	$\alpha^1$ Herculis ...	17 8 10.47	75 27	38	369	$\gamma$ Lyræ.....	18 53 38.00	57 30	3
330	$\alpha^2$ Herculis ...	17 8 10.87	75 27	2	370	$\zeta$ Aquilæ .....	18 58 53.01	76 21	47

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		h. m. s.	° ' "				h. m. s.	° ' "	
371	Radcliffe 4208	19 0 41.54	3 28	87	411	Radcliffe 4980	20 40 16.70	2 30	11
372	$\psi$ Sagittarii ...	19 6 49.97	115 30	3	412	32 Vulpeculæ	20 48 30.64	62 29	5
373	$\omega$ Aquilæ .....	19 11 8.99	78 39	5	413	B.A.C. 7268...	20 51 2.14	43 7	6
374	$f$ Aquilæ .....	19 12 57.98	95 41	4	414	B.A.C. 7290...	20 53 14.57	46 5	5
375	$\delta$ Aquilæ .....	19 18 20.25	87 10	25	415	Radcliffe 5090	20 56 3.03	4 52	17
376	B.A.C. 6652...	19 19 11.02	70 0	3	416	$\eta$ Capricorni	20 56 19.12	110 25	6
377	$\epsilon^3$ Cygni .....	19 26 7.47	38 34	15	417	$\theta$ Capricorni	20 57 57.72	107 48	2
378	$\mu$ Aquilæ .....	19 27 9.24	82 55	4	418	B.Z. 314. 125	21 1 22.17	52 1	8
379	$\lambda^2$ Sagittarii...	19 28 3.78	115 12	7	419	$\tau$ Cygni .....	21 9 7.53	52 34	2
380	42 Aquilæ ...	19 30 15.21	94 58	2	420	$\iota$ Capricorni...	21 14 20.14	107 26	6
381	(R) Cygni ...	19 33 0.32	40 7	7	421	$g$ Cygni .....	21 24 12.57	44 5	6
382	B.A.C. 6741...	19 34 0.18	41 3	5	422	$\xi$ Aquarii .....	21 30 11.33	98 29	3
383	Radcliffe 4447	19 34 46.34	2 25	10	423	5 Pegasi .....	21 31 6.74	71 19	3
384	B.A.C. 6746...	19 35 27.43	105 48	3	424	$\gamma$ Capricorni	21 32 13.11	107 18	7
385	16 Cygni (2d)	19 38 5.13	39 49	5	425	$\kappa$ Capricorni...	21 34 43.44	109 31	3
386	15 Cygni .....	19 39 9.33	52 59	3	426	16 Pegasi .....	21 46 36.19	64 44	3
387	Radcliffe 4476	19 43 22.96	4 13	24	427	20 Pegasi .....	21 54 10.37	77 33	2
388	$\alpha$ Aquilæ .....	19 43 51.26	81 30	63	428	32 Aquarii	21 57 29.13	91 35	3
389	Radcliffe 4489	19 45 8.68	4 13	20	429	$\alpha$ Aquarii .....	21 58 29.34	91 0	34
390	$\xi$ Aquilæ .....	19 47 22.00	81 54	2	430	$\iota$ Pegasi .....	22 0 24.10	65 21	3
391	58 Aquilæ ...	19 47 28.43	90 6	4	431	B.A.C. 7720...	22 2 57.87	94 35	6
392	$g$ Sagittarii ...	19 49 53.71	105 52	4	432	B.A.C. 7744...	22 5 20.20	95 25	4
393	B.A.C. 6878...	19 55 19.24	112 59	4	433	$\theta$ Aquarii .....	22 9 20.22	98 29	14
394	B.A.C. 6911...	20 0 45.55	100 28	2	434	$\gamma$ Aquarii .....	22 14 19.25	92 6	14
395	$\lambda$ Ursæ Min.	20 5 45.41	1 7	140	435	34 Pegasi .....	22 19 23.67	86 20	3
396	$\alpha^3$ Capricorni	20 10 10.39	102 59	11	436	35 Pegasi .....	22 20 40.22	86 1	4
397	Radcliffe 4721	20 11 5.58	4 32	7	437	37 Pegasi .....	22 22 47.19	86 17	3
398	B.A.C. 6986...	20 11 52.23	50 4	3	438	$\sigma$ Aquarii .....	22 23 7.75	101 24	17
399	*	20 14 29.98	106 58	4	439	Groom. 3820	22 24 0.52	4 37	40
400	$\gamma$ Cygni .....	20 17 7.95	50 12	14	440	Groom. 3824	22 24 30.58	4 30	41
401	Groom. 3212	20 19 37.17	5 45	10	441	$\alpha$ Lacertæ ...	22 25 26.81	40 27	11
402	O. Arg. 20562	20 22 46.06	106 15	4	442	$\eta$ Aquarii .....	22 28 3.53	90 51	12
403	Radcliffe 4881	20 28 47.21	5 22	9	443	8 Lacertæ (2d)	22 29 33.57	51 6	3
404	26 Vulpeculæ	20 30 3.19	64 37	4	444	$\zeta$ Pegasi .....	22 34 22.81	79 55	40
405	Radcliffe 4894	20 30 32.27	5 20	10	445	B.A.C. 7950...	22 40 8.86	44 32	9
406	24 Cep. (Hev.)	20 32 27.54	1 18	25	446	$\tau^3$ Aquarii ...	22 42 4.30	104 20	4
407	$\alpha$ Cygni .....	20 36 35.49	45 14	42	447	15 Lacertæ ...	22 45 38.21	47 27	11
408	$\psi$ Capricorni	20 37 41.03	115 47	4	448	51 Pegasi .....	22 50 29.58	70 0	3
409	51 Cygni .....	20 37 49.94	40 10	3	449	$\beta$ Piscium ...	22 56 39.03	86 57	7
410	$\gamma^1$ Delphini...	20 40 3.46	74 23	2	450	$\alpha$ Pegasi .....	22 57 41.37	75 33	29

No.	Name of Star.	Mean R.A. 1858, Jan. 1.	Approximate N.P.D.	Number of Obs.	No.	Name of Star.	Mean R.A. 1858, Jan. 1.	Approximate N.P.D.	Number of Obs.
		h. m. s.	° ' "				h. m. s.	° ' "	
451	3 Andromedæ.	22 57 48.98	40 43	2	461	Groom. 4101	23 27 49.65	3 29	43
452	5 Andromedæ.	23 1 18.88	41 29	4	462	Radcliffe 6129	23 29 47.06	4 36	12
453	6 Andromedæ.	23 3 53.95	47 13	5	463	78 Pegasi .....	23 36 51.29	61 25	4
454	$\psi^1$ Aquarii ...	23 8 27.06	99 52	4	464	Groom. 4193	23 52 56.99	4 5	26
455	$\gamma$ Piscium.....	23 9 48.24	87 30	20	465	30 Piscium ...	23 54 40.64	96 48	3
456	B.A.C. 8126...	23 13 2.20	42 24	4	466	33 Piscium ...	23 58 4.00	96 30	12
457	B.A.C. 8156...	23 16 49.23	58 15	3	467	Radcliffe 6314	23 59 47.16	4 0	6
458	$\kappa$ Piscium.....	23 19 39.18	89 31	6					
459	B.A.C. 8184...	23 22 11.66	95 18	3					
460	Radcliffe 6099	23 24 11.74	4 23	12					

# INSTRUMENTAL ERRORS

USED IN THE

REDUCTION OF THE TRANSIT OBSERVATIONS, 1858.

Date.	Pos. of Lamp.	$\frac{1}{15}$ Collim. Error.		$\frac{1}{15}$ Level Error.		$\frac{1}{15}$ Azim. Error.		Determining Stars for Azimuthal Error.
		Observed.	Adopted.	Observed.	Adopted.	Observed.	Adopted.	
1858.		"	"	"	"	"	"	
Jan. 1	E	.....	- 0.10	+ 0.304	+ 0.30	+ 0.283	+ 0.28	Rad. 1474 & Rad. 3798 .....
4	E	.....		+ 0.373	+ 0.37	{ + 0.210 + 0.264	+ 0.24	{ Rad. 1474 & Groom. 2283... Groom. 1004 & Groom. 2283
9	E	.....		+ 0.154	+ 0.15	{ + 0.063 + 0.072	+ 0.07	{ Rad. 1272 & Rad. 3750 .....
11	E	.....		+ 0.264	+ 0.26	+ 0.382	+ 0.38	{ Groom. 1004 & Rad. 3750... Rad. 1474 & Groom. 2283 ...
12	E	.....		.....	+ 0.28	.....	+ 0.42	.....
13	E	.....		+ 0.296	+ 0.30	+ 0.441	+ 0.44	Groom. 642 & Rad. 3750.....
14	E	.....		+ 0.291	+ 0.29	+ 0.605	+ 0.60	Groom. 642 & $\epsilon$ Persei .....
18	E	.....		+ 0.285	+ 0.29	+ 0.354	+ 0.35	Groom. 1004 & Rad. 3921 ...
19	E	.....		.....	+ 0.30	.....	+ 0.40	.....
20	E	.....		+ 0.313	+ 0.31	+ 0.440	+ 0.44	Groom. 1004 & Rad. 3921 ...
21	E	.....		+ 0.311	+ 0.31	+ 0.344	+ 0.34	Rad. 1272 & Rad. 3798 .....
23	E	.....		+ 0.279	+ 0.28	+ 0.287	+ 0.29	Groom. 750 & Rad. 3522 ...
25	E	.....		+ 0.308	+ 0.31	+ 0.271	+ 0.27	51 Cep. (Hev.) & 24 Ursæ Min.
26	E	.....		+ 0.291	+ 0.29	+ 0.281	+ 0.28	Rad. 1377 & 24 Ursæ Min....
27	E	.....		+ 0.293	+ 0.29	+ 0.463	+ 0.46	Rad. 1377 & $\delta$ Geminorum...
28	E	.....		.....	+ 0.30	.....	+ 0.45	.....
Feb. 1	E	.....		+ 0.351	+ 0.35	{ + 0.426 + 0.394	+ 0.41	{ Rad. 1377 & Rad. 3796..... Rad. 1377 & Rad. 3798.....
4	E	.....		+ 0.220	+ 0.22	+ 0.234	+ 0.23	51 Cephei (Hev.) & Rad. 4447
6	E	.....		.....	+ 0.25	.....	+ 0.25	.....
8	E	.....		+ 0.286	+ 0.29	+ 0.272	+ 0.27	51 Cep. (Hev.) & 24 Ursæ Min.
9	E	.....		+ 0.364	+ 0.36	+ 0.310	+ 0.31	51 Cephei (Hev.) & Rad. 4208
16	E	.....		.....	+ 0.29	.....	+ 0.31	.....
18	E	.....		+ 0.273	+ 0.27	+ 0.311	+ 0.31	51 Cep. (Hev.) & 24 Ursæ Min.
19	E	.....		.....	+ 0.31	.....	+ 0.44	.....
20	E	.....		+ 0.340	+ 0.34	+ 0.570	+ 0.57	Groom. 1359 & $\lambda$ Ursæ Min.
22	E	.....		+ 0.328	+ 0.33	+ 0.386	+ 0.39	Groom. 1359 & $\lambda$ Ursæ Min.

Date.	Pos. of Lamp.	$\frac{1}{15}$ Collim. Error.		$\frac{1}{15}$ Level Error.		$\frac{1}{15}$ Azim. Error.		Determining Stars for Azimuthal Error.	
		Observed.	Adopted.	Observed.	Adopted.	Observed.	Adopted.		
1858.		"	"	"	"	"	"		
Feb. 24	E	.....	}	+ 0'290	+ 0'29	+ 0'303	+ 0'30	Groom. 1359 & $\lambda$ Ursæ Min.	
25	E	.....		+ 0'324	+ 0'32	+ 0'271	+ 0'27	Groom. 1359 & $\lambda$ Ursæ Min.	
26	E	.....		.....	+ 0'32	.....	+ 0'28	.....	
27	E	.....		.....	+ 0'32	.....	+ 0'29	.....	
Mar. 5	E	.....	}	+ 0'299	+ 0'30	+ 0'339	+ 0'34	Groom. 1359 & Groom. 3212	
6	E	.....		+ 0'358	+ 0'36	+ 0'282	+ 0'28	Rad. 2162 & Groom. 3212 ...	
8	E	.....		+ 0'329	+ 0'33	+ 0'304	+ 0'30	Rad. 2162 & Rad. 4980 .....	
9	E	.....		+ 0'345	+ 0'35	{ + 0'312 + 0'301 }	+ 0'31	{ Groom. 1359 & Rad. 4881 ... Groom. 1359 & Rad. 4894 ...	
11	E	.....		+ 0'334	+ 0'33	+ 0'403	+ 0'40	Groom. 1359 & Groom. 3212	
13	E	.....		.....	+ 0'28	.....	+ 0'34	.....	
14	E	.....		+ 0'246	+ 0'25	+ 0'273	+ 0'27	Groom. 1620 & Groom. 3820	
17	E	.....		+ 0'116	+ 0'12	+ 0'223	+ 0'22	Rad. 2198 & Rad. 4881 .....	
22	E	.....		+ 0'193	+ 0'19	+ 0'392	+ 0'39	Rad. 2320, & Rad. 4881 & 4894	
23	E	.....		+ 0'274	+ 0'27	+ 0'440	+ 0'44	G. 1418, & R.H.C. 3120 & R. 4894	
24	E	.....		+ 0'151	+ 0'15	{ + 0'405 + 0'348 }	+ 0'38	{ Rad. 2320 & Rad. 4881 ... Rad. 2368 & Rad. 4881 ...	
26	E	.....		+ 0'260	+ 0'26	+ 0'519	+ 0'52	Rad. 2295 & Rad. 5090 .....	
29	E	.....		+ 0'359	+ 0'36	+ 0'564	+ 0'56	Rad. 2320 & Groom. 3820 ...	
April 1	E	.....		- 0'10	+ 0'268	+ 0'27	+ 0'377	+ 0'38	Rad. 2560 & Groom. 3820 ...
3	E	.....		.....	+ 0'221	+ 0'22	{ + 0'376 + 0'439 }	+ 0'41	{ Rad. 2320 & Groom. 3820 ... Rad. 2320 & R.H.C. 3608 ...
10	E	.....		.....	+ 0'286	+ 0'29	+ 0'346	+ 0'35	Rad. 2368 & Groom. 3820 ...
13	E	.....		.....	+ 0'253	+ 0'25	+ 0'406	+ 0'41	Rad. 2738 & Rad. 6099 .....
15	E	.....		.....	+ 0'176	+ 0'18	+ 0'210	+ 0'21	Groom. 1871 & Groom. 4193
17	E	.....		.....	+ 0'264	+ 0'26	+ 0'364	+ 0'36	Rad. 2560 & Groom. 4193 ...
19	E	.....		.....	+ 0'175	+ 0'18	+ 0'269	+ 0'27	Groom. 1923 & Rad. 6099 ...
20	E	.....		.....	+ 0'209	+ 0'21	+ 0'436	+ 0'44	Groom. 1923 & Rad. 6129 ...
21	E	.....		.....	+ 0'175	+ 0'18	+ 0'407	+ 0'41	Rad. 2560 & Groom. 144 ...
23	E	.....		.....	+ 0'126	+ 0'13	+ 0'356	+ 0'36	Rad. 2560 & Groom. 144 ...
24	E	.....		.....	+ 0'133	+ 0'13	+ 0'239	+ 0'24	Groom. 1923 & Ursæ Min. ...
30	E	.....		.....	.....	+ 0'34	.....	+ 0'57	.....
May 1	E	.....	}	+ 0'379	+ 0'38	+ 0'622	+ 0'62	Rad. 3075 & Groom. 144 ...	
3	E	.....		+ 0'271	+ 0'27	+ 0'473	+ 0'47	Rad. 2967 & Rad. 467 .....	
5	E	.....		+ 0'271	+ 0'27	{ + 0'462 + 0'509 }	+ 0'49	{ Groom. 1850 & Rad. 467 ... Groom. 1889 & Rad. 467 ...	
6	E	.....		+ 0'319	+ 0'32	+ 0'532	+ 0'53	Groom. 1892 & Rad. 467 ...	
7	E	.....		+ 0'230	+ 0'23	+ 0'432	+ 0'43	Groom. 1889 & Rad. 467 ...	

Date.	Pos. of Lamp.	$\frac{1}{15}$ Collim. Error.		$\frac{1}{15}$ Level Error.		$\frac{1}{15}$ Azim. Error.		Determining Stars for Azimuthal Error.
		Observed.	Adopted.	Observed.	Adopted.	Observed.	Adopted.	
1858.		"	"	"	"	"	"	
May 8	E	.....		+ 0'208	+ 0'21	+ 0'497	+ 0'50	Groom. 1892 & $\chi$ Virginis ...
10	E	.....		+ 0'246	+ 0'25	+ 0'383	+ 0'38	Groom. 1892 & Rad. 606 ...
11	E	.....		+ 0'310	+ 0'31	+ 0'543	+ 0'54	Rad. 3075 & Rad. 606.....
12	E	.....		.....	+ 0'30	.....	+ 0'52	.....
15	E	.....		+ 0'279	+ 0'28	+ 0'437	+ 0'44	Groom. 2099 & Rad. 467 ...
18	E	.....		+ 0'303	+ 0'30	+ 0'352	+ 0'35	Rad. 3250 & Rad. 693.....
22	E	.....		+ 0'300	+ 0'30	+ 0'475	+ 0'48	Groom. 2099 & Rad. 693.....
25	E	.....		.....	+ 0'26	.....	+ 0'48	.....
27	E	.....		.....	+ 0'23	.....	+ 0'49	.....
28	E	.....		+ 0'218	+ 0'22	+ 0'490	+ 0'49	Rad. 3522 & Rad. 1311 .....
June 1	E	.....		.....	+ 0'19	.....	+ 0'35	.....
2	E	.....		+ 0'179	+ 0'18	+ 0'318	+ 0'32	Rad. 3362 & Groom. 596.....
5	E	.....		+ 0'195	+ 0'20	+ 0'504	+ 0'50	Groom. 2213 & Groom. 750.
7	E	.....		+ 0'128	+ 0'13	+ 0'406	+ 0'41	Rad. 3475 & Groom. 750 ...
9	E	.....		+ 0'156	+ 0'16	+ 0'557	+ 0'56	Rad. 3354 & Groom. 750 ...
10	E	.....		+ 0'116	+ 0'12	{ + 0'412 + 0'361 }	+ 0'39	{ Rad. 3354 & Groom. 750 ... Groom. 2283 & Groom. 750
11	E	.....		+ 0'174	+ 0'17	{ + 0'452 + 0'447 }	+ 0'45	{ Groom. 2213 & Rad. 756 ... Rad. 3354 & Rad. 756 .....
12	E	.....	- 0'10	+ 0'198	+ 0'20	{ + 0'550 + 0'521 }	+ 0'54	{ Rad. 3354 & Rad. 1272..... Groom. 2213 & Rad. 1272...
14	E	.....		+ 0'164	+ 0'16	+ 0'578	+ 0'58	Rad. 3354 & Rad. 1272 .....
15	E	.....		.....	+ 0'18	.....	+ 0'58	.....
17	E	.....		.....	+ 0'21	.....	+ 0'60	.....
18	E	.....		+ 0'226	+ 0'23	+ 0'604	+ 0'60	Rad. 3522 & Rad. 1272 .....
21	E	.....		.....	+ 0'14	.....	+ 0'48	.....
22	E	.....		+ 0'116	+ 0'12	+ 0'434	+ 0'43	Rad. 3522 & Rad. 1329 .....
23	E	.....		.....	+ 0'15	.....	+ 0'55	.....
24	E	.....		+ 0'189	+ 0'19	+ 0'662	+ 0'66	Rad. 3522 & Rad. 1329 .....
25	E	.....		+ 0'213	+ 0'21	+ 0'662	+ 0'66	Rad. 4069 & Groom. 1004 ...
28	E	.....		+ 0'273	+ 0'27	+ 0'627	+ 0'63	Rad. 3685 & Groom. 956.....
29	E	.....		.....	+ 0'21	.....	+ 0'57	.....
30	E	.....		+ 0'140	+ 0'14	+ 0'507	+ 0'51	Rad. 3522 & Rad. 1329 .....
July 1	E	.....		.....	+ 0'15	.....	+ 0'50	.....
13	E	.....		+ 0'239	+ 0'24	+ 0'474	+ 0'47	Rad. 3798 & Groom. 1004 ...
14	E	.....		+ 0'249	+ 0'25	+ 0'574	+ 0'57	Rad. 4208 & Groom. 956.....
17	E	.....		+ 0'101	+ 0'10	+ 0'379	+ 0'38	Rad. 3756, 3798 & 51 Cep. (Hev.)
19	E	.....		+ 0'105	+ 0'10	+ 0'360	+ 0'36	Rad. 3921 & 51 Cephei (Hev.)
21	E	.....		+ 0'253	+ 0'25	+ 0'572	+ 0'57	24 Ursæ Min. & 51 Cep. (Hev.)

Date.	Pos. <sup>n</sup> of Lamp.	$\frac{1}{15}$ Collim. Error.		$\frac{1}{15}$ Level Error.		$\frac{1}{15}$ Azim. Error.		Determining Stars for Azimuthal Error.
		Observed.	Adopted.	Observed.	Adopted.	Observed.	Adopted.	
1858.		"	"	"	"	"	"	
July 26	E	.....	•	+ 0'216	+ 0'22	+ 0'637	+ 0'64	Rad. 4069 & Groom. 1004 ...
28	E	.....		+ 0'235	+ 0'24	+ 0'478	+ 0'48	8 Ursæ Min. & 51 Cep. (Hev.)
29	E	.....		+ 0'308	+ 0'31	+ 0'562	+ 0'56	24 Ursæ Min. & 51 Cep. (Hev.)
30	E	.....		+ 0'209	+ 0'21	+ 0'598	+ 0'60	Rad. 4721 & Rad. 2056 .....
Aug. 3	E	.....	- 0'10	+ 0'214	+ 0'21	+ 0'497	+ 0'50	24 Ursæ Min. & 51 Cep. (Hev.)
5	E	.....		+ 0'263	+ 0'26	+ 0'554	+ 0'55	Rad. 4489 & Rad. 2020 .....
6	E	.....		+ 0'180	+ 0'18	+ 0'450	+ 0'45	Rad. 4721 & 51 Cephei (Hev.)
7	E	.....		+ 0'188	+ 0'19	+ 0'566	+ 0'57	Rad. 4476 & Rad. 1979 .....
9	E	.....		+ 0'280	+ 0'28	+ 0'631	+ 0'63	24 Ursæ Min. & Rad. 1979 ...
13	E	.....		+ 0'138	+ 0'14	+ 0'396	+ 0'40	24 Ursæ Min. & Rad. 2020 ...
17	E	- 0'101		.....	.....	.....	.....	.....
"	W	+ 0'075		.....	.....	.....	.....	.....
19	W	.....		+ 0'252	+ 0'25	{ + 0'286 + 0'343 }	+ 0'31	Rad. 4208 & Groom. 1119 ...
20	W	.....		+ 0'281	+ 0'28		+ 0'25	Rad. 4489 & Rad. 2020 .....
23	W	.....		+ 0'223	+ 0'22	+ 0'253	+ 0'25	Rad. 4721 & Groom. 1119 ...
25	W	.....		+ 0'278	+ 0'28	+ 0'117	+ 0'12	Rad. 4208 & Rad. 2099 .....
27	W	.....		+ 0'278	+ 0'28	+ 0'240	+ 0'24	Rad. 5090 & Rad. 2020 .....
27	W	.....		+ 0'270	+ 0'27	+ 0'252	+ 0'25	Rad. 4721 & Rad. 2189 .....
28	W	.....		+ 0'366	+ 0'37	+ 0'256	+ 0'26	Rad. 4881, 4894; & Rad. 2343
30	W	.....		+ 0'318	+ 0'32	+ 0'361	+ 0'36	Rad. 5090 & Rad. 2020 .....
Sept. 1	W	.....	+ 0'08	+ 0'320	+ 0'32	+ 0'351	+ 0'35	24 Cephei (Hev.) & Rad. 2343
6	W	.....		.....	+ 0'25	.....	+ 0'34	.....
13	W	.....		+ 0'146	+ 0'15	+ 0'319	+ 0'32	24 Cephei (Hev.) & Rad. 2404
15	W	.....		.....	+ 0'23	.....	+ 0'33	.....
18	W	.....		+ 0'351	+ 0'35	+ 0'357	+ 0'36	Groom. 3820, 3824; & Rad. 2343, 2346, 2350 .....
22	W	.....		+ 0'253	+ 0'25	+ 0'370	+ 0'37	Groom. 3820; & Rad. 2343, 2346, 2350 .....
24	W	.....		+ 0'332	+ 0'33	+ 0'489	+ 0'49	Groom. 3820 & Rad. 2560 ...
30	W	.....		+ 0'361	+ 0'36	+ 0'524	+ 0'52	Groom. 3820, 3824; & Rad. 2404
Oct. 1	W	.....		.....	+ 0'36	.....	+ 0'49	Groom. 3820 & Rad. 2560 ...
5	W	.....		+ 0'361	+ 0'36	+ 0'359	+ 0'36	Groom. 3820 & Rad. 2560 ...
8	W	.....		+ 0'396	+ 0'40	+ 0'484	+ 0'48	Groom. 3820 & Rad. 2404 ...
9	W	.....		+ 0'416	+ 0'42	+ 0'447	+ 0'45	Groom. 4101 & Rad. 2404 ...
11	W	.....		+ 0'405	+ 0'41	+ 0'395	+ 0'40	Groom. 4101 & Rad. 2560 ...
13	W	.....		+ 0'223	+ 0'22	+ 0'303	+ 0'30	Groom. 3820 & Rad. 2404 ...
20	W	.....		.....	+ 0'31	.....	+ 0'39	.....
26	W	.....		.....	+ 0'39	.....	+ 0'47	.....

Date.	Pos <sup>n</sup> of Lamp.	$\frac{1}{15}$ Collim. Error.		$\frac{1}{15}$ Level Error.		$\frac{1}{15}$ Azim. Error.		Determining Stars for Azimuthal Error.
		Observed.	Adopted.	Observed.	Adopted.	Observed.	Adopted.	
1858.		"	"	"	"	"	"	
Oct. 28	W	.....	} + 0.08	+ 0.414	+ 0.41	+ 0.494	+ 0.49	Groom. 67; & Gr. 1937 & 1940
30	W	.....		+ 0.389	+ 0.39	+ 0.331	+ 0.33	Groom. 4101 & Groom. 1884
Nov. 8	W	.....		+ 0.396	+ 0.40	+ 0.500	+ 0.50	Groom. 339 & Groom. 2007
9	W	.....		+ 0.428	+ 0.43	+ 0.588	+ 0.59	Rad. 6314 & Rad. 2560 .....
10	W	.....		+ 0.410	+ 0.41	+ 0.478	+ 0.48	Groom. 4193 & Rad. 2738 ...
11	W	.....		+ 0.340	+ 0.34	+ 0.326	+ 0.33	Groom. 4193 & Rad. 2738 ...
17	W	.....		+ 0.461	+ 0.46	+ 0.454	+ 0.45	Groom. 339 & Groom. 2099...
18	W	.....		+ 0.406	+ 0.41	+ 0.409	+ 0.41	Groom. 144 & Rad. 2738.....
22	W	.....		+ 0.378	+ 0.38	+ 0.354	+ 0.35	Groom. 339; & Gr. 1937 & 1940
23	W	.....		+ 0.394	+ 0.39	+ 0.247	+ 0.25	Groom. 595 & Groom. 2099...
Dec. 2	W	.....		+ 0.195	+ 0.20	+ 0.284	+ 0.28	Groom. 595 & Groom. 2283...
4	W	.....		+ 0.204	+ 0.20	+ 0.404	+ 0.40	Groom. 595 & Groom. 2007...
18	W	.....		+ 0.228	+ 0.23	+ 0.367	+ 0.37	Groom. 595 & Groom. 2283...
22	W	.....		+ 0.221	+ 0.22	+ 0.424	+ 0.42	Groom. 642 & Groom. 2283...



# ERRORS AND RATES OF THE TRANSIT-CLOCK

DURING THE YEAR 1858,

USED IN THE REDUCTION OF THE OBSERVATIONS.

Day, 1858.	Sidereal Time of Mean of Group.	Clock slow correspond- ing to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.	Day, 1858.	Sidereal Time of Mean of Group.	Clock slow correspond- ing to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
	h. m.	s.	s.	s.		h. m.	s.	s.	s.
Jan. 1	6 5	66.83	+0.79	+1.15	Feb. 22	6 46	39.37	+0.51	+0.49
4	3 15	10.37	1.23	1.03	24	7 25	40.30	0.46	0.50
9	5 5	13.99	0.71	0.65	25	8 34	41.12	0.52	0.31
11	5 3	15.23	0.62	0.73	26	6 28	41.21	0.10	0.30
12	4 55	16.01	0.78	0.74	27	8 36	41.75	0.50	0.45
13	4 53	16.70	0.69	0.70					
14	4 9	17.39	0.71	0.72	Mar. 5	8 20	42.66	0.15	0.09
18	4 52	20.48	0.77	0.63	6	8 5	42.74	0.08	0.09
19	4 34	21.07	0.60	0.68	8	8 19	42.97	0.11	0.12
20	6 25	21.88	0.75	0.67	9	8 22	43.10	0.13	0.18
* 21	5 38	22.45	0.59	0.60	11	8 29	43.66	0.28	0.44
21	6 23	22.21	0.63	0.63	13	8 39	44.77	0.55	0.51
* 23	5 45	23.71	0.63	0.63	14	10 19	45.29	0.49	0.59
23	5 28	23.41	0.63	0.63	17	9 45	47.89	0.87	0.87
25	5 0	24.66	0.63	0.63	22	9 48	52.29	0.88	0.94
26	6 29	25.33	0.63	0.66	23	9 19	53.22	0.95	0.94
27	5 46	25.99	0.68	0.84	24	9 29	54.15	0.92	0.87
28	6 14	27.01	1.00	0.94	26	9 55	55.70	0.77	0.77
			0.70	0.53	29	11 43	58.08	0.78	0.73
Feb. 1	6 9	29.80	0.41	0.52				0.68	0.81
4	6 4	31.04	0.60	0.56	April 1	11 0	60.10	0.89	0.89
6	5 52	32.24	0.52	0.45	3	9 56	61.82	0.90	1.05
8	6 3	33.29	0.41	0.41	10	11 13	8.16	1.12	1.26
9	7 6	33.72	0.44	0.46	13	11 5	11.52	1.35	1.08
16	8 37	36.86	0.47	0.32	15	11 1	14.21	0.80	0.91
18	7 30	37.77	0.25	0.30	17	10 59	15.80	1.02	0.88
19	5 50	38.00	+0.35	+0.40	19	11 25	17.86	+0.81	+1.00
20	7 12	38.37			20	11 27	18.67		

Jan. 4. and Apr. 10. Before the observations of these days the clock was put forward one minute.

Jan. 21. From this time to Feb. 24. observations were made by means of the chronograph.

On Jan. 21. and 23, when observations were made by both methods, the eye and ear groups are distinguished by an asterisk.

Day, 1858.	Sidereal Time of Mean of Group.	Clock slow correspond- ing to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.	Day, 1858.	Sidereal Time of Mean of Group.	Clock slow correspond- ing to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
	h. m.	s.	s.	s.		h. m.	s.	s.	s.
Apr. 21	11 50	19'87	+ 1'18	+ 1'16	June 24	17 10	3'88	+ 0'09	+ 0'11
23	12 7	22'08	1'10	1'11	25	17 46	4'00	0'12	0'10
24	11 52	23'18	1'11	1'06	28	18 7	4'19	0'06	0'10
30	12 44	27'71	0'75	0'48	29	16 58	4'30	+ 0'11	+ 0'02
					30	17 33	4'24	- 0'06	- 0'02
May 1	13 13	28'15	0'43	0'49	July 1	17 5	4'27	+ 0'03	+ 0'03
3	13 18	29'38	0'62	0'67	13	18 31	3'55	- 0'06	0'07
5	13 2	30'81	0'72	0'81	14	18 44	3'62	+ 0'07	0'12
6	13 24	31'68	0'96	0'91	17	18 28	4'38	0'26	0'26
7	12 56	32'62	0'99	0'98	19	18 1	4'90	0'26	0'13
8	12 43	33'60	0'95	0'98	21	18 23	4'90	0'00	0'01
10	13 7	35'51	0'54	0'68	26	18 40	5'07	0'03	+ 0'04
11	13 31	36'06	0'66	0'60	28	18 1	5'17	+ 0'05	- 0'10
12	13 47	36'73	0'72	0'59	29	18 36	4'99	- 0'18	0'00
15	13 37	38'88	0'96	0'68	30	18 50	5'16	+ 0'17	+ 0'16
18	13 36	41'77	0'93	0'95					
22	13 52	45'52	0'90	0'90	Aug. 3	18 52	5'60	0'11	0'14
25	15 3	48'20	0'88	0'99	5	18 54	5'89	0'15	0'23
27	16 40	50'38	1'06	1'00	6	19 26	6'16	+ 0'27	0'12
28	15 39	51'31	0'97	1'02	7	18 50	6'13	- 0'03	0'05
					9	19 49	6'58	+ 0'22	0'24
June 1	15 8	56'20	1'23	1'30	13	19 14	7'76	0'30	0'21
2	15 30	57'54	1'32	1'25	19	19 21	8'23	0'08	0'12
5	15 16	0'67	1'95	0'14	20	19 52	8'36	0'13	0'15
7	15 28	0'96	0'14	0'15	23	21 32	8'95	0'19	0'10
9	15 29	1'27	0'16	0'18	25	20 20	9'02	0'04	+ 0'05
10	15 42	1'46	0'19	0'24	27	20 12	9'14	+ 0'06	- 0'08
11	15 45	1'74	0'28	0'16	28	20 23	8'99	- 0'15	0'13
12	16 9	1'78	0'04	0'09	30	20 42	8'81	0'09	0'07
14	16 0	2'13	0'18	0'22					
15	16 15	2'13	0'24	0'24	Sept. 1	20 42	8'71	0'05	- 0'05
17	15 47	2'83	+ 0'23	0'02	6	21 45	8'45	- 0'05	+ 0'02
18	15 53	2'75	- 0'08	0'00	13	20 8	9'21	+ 0'11	0'13
21	15 33	3'43	+ 0'23	0'14	15	20 51	9'49	0'14	0'11
22	16 5	3'54	0'11	0'18	18	21 24	9'70	+ 0'07	+ 0'06
23	16 2	3'79	+ 0'25	+ 0'17					

May 12. and 15. The adopted rate is rather too small, on account of an error discovered after the Transit Observations had been printed off.

June 5. Before the observations of this day the clock was put forward one minute, and a different compensation-weight was applied.

Day, 1858.	Sidereal Time of Mean of Group.	Clock slow correspond- ing to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.	Day, 1858.	Sidereal Time of Mean of Group.	Clock slow correspond- ing to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
	h. m.	s.	s.	s.		h. m.	s.	s.	s.
Sept. 22	23 19	9.90	+ 0.05	+ 0.12	Nov. 8	1 49	+ 1.08	- 0.34	+ 0.35
24	22 6	9.60	- 0.15	0.13	9	0 24	0.75	- 0.35	- 0.09
30	22 23	10.09	+ 0.08	+ 0.01	10	0 35	0.93	+ 0.18	+ 0.24
					11	0 17	+ 1.21	+ 0.29	+ 0.22
Oct. 1	22 32	10.09	0.00	0.00	17	1 7	- 0.06	- 0.21	- 0.40
5	23 5	10.12	+ 0.01	- 0.15	18	1 13	0.49	0.43	0.43
8	22 35	9.33	- 0.27	0.13	22	1 40	2.26	0.44	0.44
9	22 59	9.25	0.08	0.14	23	1 7	- 2.69	0.44	0.41
11	22 18	8.74	0.26	0.18					
13	22 13	8.54	0.10	0.12	Dec. 2	2 46	+ 55.63	- 0.19	0.02
20	0 30	7.06	0.21	0.26	4	2 10	55.66	+ 0.02	0.02
26	22 35	5.27	0.30	0.29	18	3 5	51.65	- 0.29	0.27
28	0 39	4.68	0.28	0.26	22	3 52	50.62	0.26	0.27
30	22 33	4.19	- 0.24	- 0.26	29	3 34	+ 48.67	- 0.28	- 0.28

Dec. 2. Before the observations of this day, the transit clock was put back one minute.

# SEPARATE RESULTS FOR MEAN R.A. OF STARS

OBSERVED AT THE

RADCLIFFE OBSERVATORY, OXFORD,

IN THE YEAR 1858.

$\beta$ Cassiopeæ.			$d$ Piscium.			B.A.C. 111.			13 Ceti.		
	Mag.	h. m. o. 1		Mag.	h. m. o. 13		Mag.	h. m. o. 22		Mag.	h. m. o. 27
Oct. 8	...	37 <sup>s</sup> 40	Sept. 22	...	17 <sup>s</sup> 72	Oct. 20	...	40 <sup>s</sup> 27	Nov. 10	6 <sup>s</sup> 3	56 <sup>s</sup> 44
30		37 <sup>s</sup> 85	Nov. 10	6 <sup>s</sup> 0	17 <sup>s</sup> 58	Groombridge 67.			11	6 <sup>s</sup> 0	56 <sup>s</sup> 35
6 Ceti.			11	5 <sup>s</sup> 3	17 <sup>s</sup> 67				B.A.C. 154.		
			18	6 <sup>s</sup> 0	17 <sup>s</sup> 48						
			9 Ceti.			Oct. 28	8 <sup>s</sup> 0	42 <sup>s</sup> 71			
Sept. 22	...	1 <sup>s</sup> 96				12 Ceti.			Nov. 18	6 <sup>s</sup> 7	13 <sup>s</sup> 01
$\gamma$ Pegasi.			Nov. 22	7 <sup>s</sup> 0	35 <sup>s</sup> 42				23	...	13 <sup>s</sup> 71
			B.A.C. 81.			Nov. 9	6 <sup>s</sup> 5	47 <sup>s</sup> 73	B.A.C. 161.		
Nov. 11	...	55 <sup>s</sup> 61				11	6 <sup>s</sup> 5	47 <sup>s</sup> 67			
B.A.C. 47.			Nov. 11	7 <sup>s</sup> 0	14 <sup>s</sup> 31	22	6 <sup>s</sup> 0	47 <sup>s</sup> 66	Oct. 28	6 <sup>s</sup> 7	11 <sup>s</sup> 73
			B.A.C. 86.			23	...	47 <sup>s</sup> 59	Nov. 22	7 <sup>s</sup> 5	11 <sup>s</sup> 83
Nov. 11	...	22 <sup>s</sup> 86				13 Cassiopeæ.			$\epsilon$ Andromedæ.		
38 Piscium (1st star)			Nov. 9	7 <sup>s</sup> 0	6 <sup>s</sup> 42						
			45 Piscium.			Nov. 18	6 <sup>s</sup> 3	17 <sup>s</sup> 56	Oct. 20	...	3 <sup>s</sup> 75
Nov. 18	8 <sup>s</sup> 3	5 <sup>s</sup> 51				52 Piscium.			30	...	3 <sup>s</sup> 73
			Sept. 22	...	22 <sup>s</sup> 80				$\delta$ Andromedæ.		
39 Piscium.			Oct. 20	...	22 <sup>s</sup> 79	Oct. 20	...	9 <sup>s</sup> 33			
			10 Ceti.			B.A.C. 132.			Nov. 9	...	44 <sup>s</sup> 72
Nov. 10	7 <sup>s</sup> 7	28 <sup>s</sup> 28	Nov. 18	6 <sup>s</sup> 7	20 <sup>s</sup> 52				Dec. 2	...	44 <sup>s</sup> 63
$\epsilon$ Ceti.			22	7 <sup>s</sup> 0	20 <sup>s</sup> 65	Nov. 22	8 <sup>s</sup> 3	13 <sup>s</sup> 46	32 Andromedæ.		
			B.A.C. 98.			B.A.C. 138.					
Nov. 9	...	11 <sup>s</sup> 46							Oct. 28	6 <sup>s</sup> 0	26 <sup>s</sup> 33
			Nov. 10	7 <sup>s</sup> 0	8 <sup>s</sup> 33	Nov. 9	7 <sup>s</sup> 5	14 <sup>s</sup> 72	Nov. 10	6 <sup>s</sup> 0	25 <sup>s</sup> 92

B.A.C. 191.			B.A.C. 232.			ε Piscium.			η Ceti.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Nov. 17	...	0. 35	Nov. 23	...	0. 42	Oct. 28	4.5	0. 55	Nov. 11	...	1. 1
22	7.5	47.27			51.30	Nov. 10	...	34.71			26.80
		47.45	20 Ceti.			17	...	34.76	β Andromedæ.		
β Ceti.					0. 45	18	4.0	34.71			1. 1
Dec. 2	...	0. 36	Nov. 10	...	45.08	25 Ceti.			Dec. 2	...	47.78
		27.60	17	...	45.18						
φ <sup>1</sup> Ceti.			Groombridge 144.			Nov. 9	6.3	0. 55	θ Cassiopeizæ.		
					0. 46			51.74			1. 2
Oct. 20	...	0. 37	Apr. 21	...	5.36	ψ <sup>1</sup> Piscium (1st star)			Dec. 4	4.7	28.85
28	5.5	1.67	23	...	6.31						
		1.58	May 1	6.5	5.24	Dec. 4	6.0	0. 58	B.A.C. 341.		
61 Piscium.			Nov. 18	7.0	5.71			4.39			1. 2
		0. 40	ν <sup>1</sup> Cassiopeizæ.			ψ <sup>1</sup> Piscium (2d star)			Nov. 18	6.0	39.98
Nov. 9	7.0	23.59			0. 46						
η <sup>1</sup> Cassiopeizæ.			Oct. 30	...	36.17	Dec. 4	6.3	0. 58	B.A.C. 351.		
		0. 40	21 Ceti.					5.33			1. 4
Dec. 2	...	32.23			0. 47	77 Piscium (2d star)			Dec. 2	7.3	2.89
η <sup>2</sup> Cassiopeizæ.			Oct. 20	...	6.95						
		0. 40	γ Cassiopeizæ.			Nov. 18	7.7	0. 58	B.A.C. 350.		
Dec. 2	...	33.16			0. 48			30.98			1. 4
4	8.0	33.12	Nov. 23	...	10.53	41 Andromedæ.			Nov. 9	...	6.36
δ Piscium.			φ <sup>3</sup> Ceti.					0. 59	B.A.C. 358.		
		0. 41			0. 48	Nov. 23	...	52.72			1. 5
Oct. 20	...	19.17	Nov. 9	5.7	54.39	B.A.C. 320.			Oct. 28	7.0	10.91
28	5.0	19.05	10	...	54.32			1. 0	ζ <sup>1</sup> Piscium.		
64 Piscium.			11	6.3	54.23	Oct. 28	5.7	9.80			1. 6
		0. 41	17	...	54.28	Nov. 9	...	9.42	Oct. 30	...	19.05
Nov. 10	5.3	31.42	2 Ursæ Minoris.			78 Piscium.			Nov. 17	...	18.98
11	5.5	31.31			0. 50			1. 0	22	6.0	19.03
B.A.C. 225.			Apr. 24	...	3.16	Nov. 17	...	10.48	Dec. 4	6.0	19.12
		0. 41	* N.P.D. 30° 39'.			ψ <sup>2</sup> Piscium.			ζ <sup>2</sup> Piscium.		
Nov. 22	6.0	52.33			0. 54			1. 0			1. 6
			Nov. 11	9.5	12.71	Nov. 22	6.3	20.56	Nov. 22	6.7	20.46
			Dec. 4	9.0	12.71				Dec. 4	6.5	20.53

38 Ceti.			B.A.C. 454.			B.A.C. 514.			γ Arietis (North Star)		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		1. 7			1. 24			1. 33			1. 45
Nov. 11	6.5	34.35	Nov. 17	...	12.66	Dec. 4	6.7	38.27	Nov. 18	4.7	44.72
B.A.C. 378.			B.A.C. 469.			ο Piscium.			γ Arietis (South Star)		
		1. 8			1. 27			1. 37			1. 45
Dec. 2	7.0	37.38	Nov. 17	...	8.43	Nov. 8	...	53.85	Nov. 17	5.0	44.80
			18	6.5	8.50	9	...	54.17			
B.A.C. 410.			Radcliffe 467.			ε Sculptoris.			β Arietis.		
		1. 15			1. 27			1. 38			1. 46
Oct. 28	8.0	31.63	May 3	8.3	52.48	Nov. 18	5.7	59.72	Nov. 8	...	48.18
θ <sup>1</sup> Ceti.			5	...	52.38	Lalande 3259.			56 Andromedæ.		
		1. 16	6	8.0	52.86			1. 39			1. 47
Nov. 9	...	55.56	7	8.3	53.08	Dec. 4	...	39.99	Nov. 9	...	44.06
23	...	55.62	15	8.0	52.40	B.A.C. 544.			B.A.C. 586.		
Groombridge 307.			50 Andromedæ.					1. 40			1. 48
		1. 17			1. 28	Nov. 22	6.5	16.92	Nov. 22	7.0	33.65
Dec. 2	7.7	46.24	Dec. 2	4.7	28.69	B.A.C. 545.			Groombridge 410.		
38 Cassiopeizæ, A.			B.A.C. 490.					1. 40			1. 49
		1. 20			1. 30	Dec. 2	7.3	43.84	Dec. 4	7.0	5.99
Nov. 18	5.5	43.86	Dec. 4	7.5	7.73	B.A.C. 555.			ι Arietis.		
B.A.C. 443.			42 Cassiopeizæ.					1. 41			1. 49
		1. 22			1. 31	Nov. 17	6.5	53.03	Nov. 18	5.7	36.00
Nov. 22	7.3	5.91	Dec. 2	5.5	59.43	ε Cassiopeizæ.			B.A.C. 607.		
B.A.C. 444.			Groombridge 339.					1. 44			1. 51
		1. 22			1. 32	Nov. 9	...	13.33	Nov. 17	...	43.36
Dec. 2	7.0	10.64	Nov. 8	...	9.89	23	...	13.25			
B.A.C. 452.			17	8.0	10.11	Lalande 3405.			112 Piscium.		
		1. 23	22	8.5	10.09			1. 44			1. 52
Nov. 18	6.3	41.32	τ Andromedæ.			Nov. 8	...	16.04	Nov. 9	...	46.37
η Piscium.					1. 32	α Trianguli.			51 Cassiopeizæ.		
		1. 23			1. 33			1. 44			1. 53
Nov. 23	...	53.35	B.A.C. 509.			Dec. 4	...	59.78	Nov. 23	...	11.21
			Nov. 11	7.0	3.14						

$\alpha^1$ Piscium.			16 Arietis.			66 Andromedæ.			$\gamma^2$ Eridani.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		1. 54			2. 3			2. 18			2. 44
Nov. 18	6.0	42.00	Dec. 4	6.7	7.77	Nov. 18	6.5	21.60	Nov. 18	5.0	35.97
$\gamma^2$ Andromedæ.			Oeltz. Arg. 2462.			Radcliffe 693.			Dec. 2	...	36.01
		1. 55			2. 3			2. 18	29	...	35.96
Nov. 8	...	12.77	Nov. 11	8.5	30.36	May 18	8.7	34.30	47 Arietis.		
10 Arietis.			6 Trianguli (2nd star)			22	8.7	35.59			2. 49
		1. 55			2. 4	$\sigma$ Ceti.			Dec. 29	...	57.90
Nov. 22	7.0	36.24	Nov. 18	7.0	8.87			2. 25	B.A.C. 908.		
54 Cassiopeizæ.			* N.P.D. 34° 40'.			Nov. 17	...	21.42			2. 49
		1. 56			2. 5	$\nu$ Ceti.			Jan. 4	6.5	59.64
Nov. 17	6.7	57.68	Nov. 9	...	59.23			2. 28	Dec. 4	...	59.33
Lalande 3825.			20 Arietis.			Dec. 4	...	25.54	18	6.7	59.69
		1. 57			2. 7	18	...	25.57	$\epsilon$ Arietis.		
Nov. 9	7.5	21.24	Dec. 4	6.3	38.74	30 Arietis.					2. 51
$\alpha$ Arietis.			67 Ceti.					2. 28	Dec. 2	5.3	6.04
		1. 59			2. 9	Nov. 22	...	46.88	B.A.C. 932.		
Dec. 4	...	10.42	Nov. 11	6.3	54.28	B.A.C. 797.					2. 52
58 Andromedæ.			$\circ$ Ceti.					2. 28	Jan. 13	7.5	23.51
		1. 59			2. 12	Nov. 22	...	49.73	$\alpha$ Ceti.		
Nov. 8	...	55.82	Nov. 17	...	10.43	$\nu$ Arietis.					2. 54
Radcliffe 606.			18	...	10.52			2. 30	Jan. 4	...	51.69
		1. 59	22	...	10.41	Jan. 4	5.7	45.75	Dec. 2	...	51.60
May 10	...	58.93	Dec. 4	2.7	10.53	Radcliffe 756.			$\rho$ Persei.		
11	8.5	58.00	18	...	10.42			2. 31			2. 56
$\beta$ Trianguli.			$\kappa$ Fornacis.			June 11	9.0	33.10	Nov. 22	...	5.29
		2. 1			2. 16	$\gamma$ Ceti.			Dec. 29	...	5.24
Nov. 10	...	6.21	Nov. 11	...	2.77			2. 35	$\epsilon$ Persei.		
18	...	6.54	B.A.C. 741.			Jan. 4	...	56.82			2. 58
Oeltz. Arg. 2423.					2. 16	Nov. 22	...	56.82	Jan. 4	...	50.34
		2. 1	Nov. 17	...	55.61	Dec. 18	...	56.80	13	4.3	50.38
Nov. 9	7.7	22.27	B.A.C. 743.			29	...	56.88	14	...	50.41
22	8.0	22.30			2. 17						
			Dec. 18	...	3.13						

Groombridge 595.			R.H.C. 505.			30 Eridani.			B.A.C. 1273.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		2. 59			3. 27			3. 45			3. 59
June 2	5.7	25.87	June 9	8.7	13.53	Jan. 11	6.0	40.95	Dec. 29	...	46.29
Nov. 23	...	26.44	B.A.C. 1110.			B.A.C. 1222.			♄ <sup>1</sup> Tauri.		
Dec. 2	5.7	25.50			3. 29			3. 48			4. 0
4	...	25.28	Jan. 14	7.0	30.51	Dec. 2	...	25.72	Jan. 19	...	53.81
18	6.0	25.95	♄ Persei.			B.A.C. 1229.			* N.P.D. 77° 4'.		
53 Arietis.					3. 32			3. 49			4. 3
		2. 59	Dec. 4	...	49.68	Jan. 4	7.3	50.87	Jan. 4	10.0	54.65
Nov. 22	...	26.40	22	...	49.78	11	6.7	51.01	11	10.5	54.76
B.A.C. 979.			22 Eridani.			13	7.3	51.11	B.A.C. 1286.		
		3. 2	Jan. 4	6.0	36.62	λ Tauri.					4. 4
Jan. 11	5.7	28.20	9	6.0	36.71			3. 52	Jan. 13	6.0	24.62
♄ Arietis.			11	5.7	36.62	Jan. 14	4.7	49.15	14	6.5	24.23
		3. 3	14 Tauri.			Groombridge 750.			* N.P.D. 43° 35'.		
Nov. 22	...	30.84			3. 35			3. 53			4. 6
Dec. 29	...	30.97	Jan. 13	6.7	34.96	Jan. 23	...	13.52	Jan. 18	7.7	30.07
95 Ceti.			14	7.3	35.01	June 5	...	14.53	25	7.7	30.22
		3. 11	π Eridani.			7	6.7	15.25	B.A.C. 1308.		
Dec. 2	5.7	6.59			3. 39	9	...	15.01			4. 8
22	...	6.74	Jan. 9	5.5	25.97	10	6.7	14.38	Jan. 11	...	25.69
κ <sup>1</sup> Ceti.			13	5.0	26.01	ν Tauri.					4. 8
		3. 11	27 Tauri.					3. 55	♄ <sup>2</sup> Eridani.		
Dec. 18	5.5	54.89	Dec. 18	...	3. 40	Jan. 4	...	36.38			4. 8
64 Arietis.			22	...	43.40	A <sup>1</sup> Tauri.			Jan. 13	5.0	44.24
		3. 15	29	...	43.42			3. 56	R.H.C. 611.		
Dec. 2	5.5	55.84	B.A.C. 1187.			Jan. 11	5.0	18.39			4. 8
Groombridge 642.					3. 41	13	4.5	18.45	June 28	8.5	44.24
		3. 20	Jan. 14	...	29.38	18	...	18.33	♄ <sup>2</sup> Tauri.		
Jan. 13	6.3	24.15	B.A.C. 1205.			Dec. 2	5.0	18.48			4. 8
Dec. 22	...	23.82			3. 44	* N.P.D. 70° 31'.			Jan. 19	...	56.53
29	...	23.88	Jan. 13	7.7	56.19			3. 58			4. 8
			14	7.5	56.47	Dec. 18	8.5	0.73			56.53



$\phi$ Tauri.			79 Tauri.			$\sigma^2$ Tauri.			Piazzi iv. 189.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Jan. 11	...	4 11 37 <sup>72</sup>	Dec. 22	...	4 20 53 <sup>06</sup>	Jan. 23	5 <sup>5</sup>	4 31 9 <sup>43</sup>	Jan. 12	7 <sup>0</sup>	4 39 43 <sup>67</sup>
12	...	37 <sup>62</sup>	B.A.C. 1379.			Radcliffe 1272.			21	7 <sup>5</sup>	43 <sup>68</sup>
13	4 <sup>7</sup>	37 <sup>49</sup>			4 21			4 31	23	7 <sup>3</sup>	43 <sup>68</sup>
14	5 <sup>5</sup>	37 <sup>54</sup>	Jan. 12	...	21 <sup>16</sup>	Jan. 9	8 <sup>0</sup>	12 <sup>44</sup>	58 Eridani.		
B.A.C. 1335.			18	...	22 <sup>06</sup>	21	8 <sup>3</sup>	11 <sup>79</sup>			4 41
Jan. 4	6 <sup>7</sup>	53 <sup>86</sup>	83 Tauri.			June 12	...	11 <sup>59</sup>	Feb. 1	...	13 <sup>90</sup>
18	6 <sup>7</sup>	53 <sup>61</sup>			4 22	14	8 <sup>0</sup>	11 <sup>39</sup>	Radcliffe 1311.		
19	...	53 <sup>70</sup>	Jan. 21	6 <sup>0</sup>	37 <sup>94</sup>	18	7 <sup>7</sup>	11 <sup>91</sup>			4 42
21	6 <sup>5</sup>	53 <sup>66</sup>	23	...	37 <sup>83</sup>	* N.P.D. 104° 52'.			May 28	...	0 <sup>11</sup>
B.A.C. 1342.			B.A.C. 1399.					4 32	$\pi^1$ Orionis.		
Dec. 18	6 <sup>7</sup>	1 <sup>93</sup>	Jan. 12	...	4 24 18 <sup>45</sup>	Jan. 14	...	7 <sup>32</sup>	Jan. 19	...	4 42 8 <sup>01</sup>
22	...	1 <sup>96</sup>	13	8 <sup>0</sup>	18 <sup>58</sup>	$\tau^1$ Tauri.			21	...	8 <sup>01</sup>
B.A.C. 1347.			$\rho$ Tauri.					4 33	25	...	8 <sup>14</sup>
Jan. 14	8 <sup>0</sup>	55 <sup>83</sup>	Jan. 11	...	4 25 47 <sup>62</sup>	Jan. 25	7 <sup>7</sup>	41 <sup>22</sup>	B.A.C. 1496.		
18	7 <sup>5</sup>	55 <sup>83</sup>	18	...	47 <sup>77</sup>	27	7 <sup>5</sup>	41 <sup>16</sup>			4 44
$\delta^2$ Tauri.			19	...	47 <sup>55</sup>	Dec. 22	...	41 <sup>11</sup>	Jan. 12	...	22 <sup>57</sup>
Jan. 19	...	4 15 54 <sup>86</sup>	25	...	47 <sup>55</sup>	$\tau^2$ Tauri.			Radcliffe 1329.		
25	...	54 <sup>78</sup>	Aldebaran.			Jan. 25	5 <sup>3</sup>	4 33 43 <sup>64</sup>	June 22	8 <sup>3</sup>	4 46 5 <sup>28</sup>
$\kappa^2$ Tauri.			Jan. 18	...	4 27 46 <sup>60</sup>	27	5 <sup>0</sup>	43 <sup>68</sup>	24	8 <sup>3</sup>	5 <sup>59</sup>
Jan. 21	...	4 16 57 <sup>78</sup>	19	...	46 <sup>47</sup>	Dec. 18	...	43 <sup>53</sup>	30	8 <sup>5</sup>	5 <sup>19</sup>
23	...	57 <sup>65</sup>	23	...	46 <sup>56</sup>	54 Eridani.			B.A.C. 1510.		
$\nu^1$ Tauri.			27	...	46 <sup>58</sup>			4 34	Jan. 21	6 <sup>7</sup>	4 46 48 <sup>91</sup>
Dec. 18	...	4 17 48 <sup>97</sup>	28	...	46 <sup>69</sup>	Jan. 19	...	14 <sup>10</sup>	27	6 <sup>5</sup>	48 <sup>55</sup>
$\theta^2$ Tauri.			Dec. 22	...	46 <sup>52</sup>	$\mu$ Eridani.			Feb. 4	6 <sup>5</sup>	48 <sup>92</sup>
Jan. 19	...	4 20 33 <sup>49</sup>	$\nu^6$ Eridani.					4 38	$\iota$ Aurigæ.		
			Jan. 14	...	4 27 56 <sup>92</sup>	B.A.C. 1471.					4 47
			B.A.C. 1428.					4 38	Jan. 9	...	45 <sup>06</sup>
			Jan. 12	6 <sup>3</sup>	47 <sup>76</sup>	Dec. 18	...	32 <sup>65</sup>	14	...	44 <sup>95</sup>
			13	6 <sup>3</sup>	48 <sup>35</sup>	29	...	32 <sup>66</sup>	25	...	45 <sup>05</sup>
			25	6 <sup>0</sup>	48 <sup>06</sup>						

B.A.C. 1522.			ε Leporis.			Rigel.			B.A.C. 1696.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		4 48			4 59			5 7			5 19
Jan. 4	6 3	28 64	Jan. 9	...	27 06	Jan. 23	...	42 96	Feb. 8	7 5	5 45
Feb. 1	6 5	28 79	21	...	27 16	Dec. 29	...	42 96			
			23	...	27 16						
ε Aurigæ.			13 Orionis.			λ Aurigæ.			ψ <sup>2</sup> Orionis.		
		4 51			4 59			5 9			5 19
Jan. 12	...	47 13	Jan. 28	...	51 55	Jan. 26	...	9 53	Feb. 6	...	24 16
14	...	47 13	Feb. 4	6 5	51 59	Feb. 1	5 5	9 34	8	5 0	23 95
			8	6 5	51 83	4	5 7	9 23			
* N.P.D. 105° 0'.			β Eridani.			τ Orionis.			B.A.C. 1706.		
		4 52			5 0			5 10			5 20
Jan. 23	8 0	8 51	Jan. 12	...	52 21	Feb. 6	...	42 80	Jan. 18	...	45 87
Feb. 4	8 0	8 34	13	...	52 22				23	6 3	45 67
8	7 5	8 41	19	...	52 36				Feb. 1	6 3	45 81
(R) Leporis.			λ Orionis.			ο Columbae.			Groombridge 956.		
		4 53			5 1			5 12			5 21
Jan. 9	6 5	8 66	Dec. 22	...	31 08	Jan. 9	...	22 10	June 28	7 3	20 71
21	6 7	8 76	29	...	31 03	Feb. 4	...	22 04	July 14	7 7	20 32
23	6 3	8 74									
28	6 3	8 68									
Feb. 4	6 3	8 60									
8	6 0	8 63									
Dec. 29	...	8 62									
64 Eridani.			λ Eridani.			B.A.C. 1661.			B.A.C. 1718.		
		4 53			5 2			5 14			5 22
Jan. 4	5 7	20 09	Jan. 9	...	21 19	Jan. 18	8 0	37 69	Jan. 9	...	33 98
			21	...	21 17	Feb. 1	7 7	37 73	8	...	33 83
						8	7 7	37 61	Feb. 4	...	33 83
Radcliffe 1377.			Capella.			III Tauri.			χ Aurigæ.		
		4 56			5 6			5 16			5 23
Jan. 26	7 3	3 63	Jan. 19	...	12 25	Jan. 23	6 3	8 38	Feb. 22	...	29 29
Feb. 1	7 0	3 00	Feb. 4	...	12 22	25	6 0	8 30			
			6	...	12 47						
1 Leporis.			μ Leporis.			B.A.C. 1678.			Radcliffe 1474.		
		4 56			5 6			5 16			5 23
Jan. 28	...	45 59	Jan. 12	...	33 44	Dec. 29	...	38 24	Jan. 1	...	36 51
			26	...	33 43				4	8 3	35 24
B.A.C. 1565.			B.A.C. 1610.			γ Orionis.			11	8 3	35 01
		4 59			5 6			5 17			
Jan. 4	5 7	14 66	Jan. 4	6 7	35 46	Jan. 12	...	30 86			5 27
			11	7 0	35 70	13	...	31 05	Jan. 25	7 0	6 15
						Feb. 1	...	30 93	Feb. 8	7 0	6 14
						4	...	30 93			

$\theta^1$ Orionis (1st star)			B.A.C. 1808.			$\alpha$ Orionis.			140 Tauri.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Jan. 9	7.0	17.59	Jan. 11	7.5	24.28	Jan. 11	...	28.98	Feb. 18	8.0	51.78
12	...	17.45	18	7.0	24.34				22	7.7	51.78
18	7.3	17.46	25	7.3	24.13	B.A.C. 1881.			38 Aurigæ.		
23	7.3	17.44	Feb. 8	7.3	24.14			5.47			5.53
$\theta^1$ Orionis (2nd star)			Lalande 10912.			Jan. 13	7.0	35.82	Jan. 23	6.5	3.58
		5.28			5.39	Feb. 8	6.7	35.55	26	...	3.83
Jan. 13	8.5	17.84	Feb. 18	8.0	14.92	$\delta$ Aurigæ.			66 Orionis.		
28	8.3	17.71	22	7.5	14.82			5.47	Jan. 21	6.3	28.38
Feb. 1	8.3	17.56	$\kappa$ Orionis.			Feb. 6	...	50.51	Feb. 8	6.0	28.57
$\theta^1$ Orionis (3rd star)					5.41	18	...	50.32	9	...	28.33
		5.28	Feb. 19	...	1.51	139 Tauri.			2 Geminorum.		
Feb. 4	5.7	18.02	B.A.C. 1859.					5.49			5.58
Dec. 29	...	18.22			5.42	Jan. 25	...	10.91	Jan. 1	...	9.42
$\theta^1$ Orionis (4th star)			Feb. 4	...	38.74	26	...	11.06	13	6.7	9.32
		5.28	137 Tauri.			Feb. 4	5.5	11.04	36 Camelopardali.		
Jan. 23	7.0	19.00			5.44	Groombridge 1004.					5.58
28	7.0	18.81	Jan. 9	6.3	18.47	Jan. 4	6.5	20.00	Jan. 25	...	33.63
Feb. 1	7.0	18.90	11	5.7	18.27	9	6.3	21.69	Feb. 4	5.5	33.92
$\zeta$ Tauri.			136 Tauri.			18	...	20.78	7 Geminorum.		
		5.29			5.44	20	6.5	21.35			6.6
Feb. 6	...	9.60	Jan. 25	...	24.00	June 25	6.7	20.67	Jan. 1	...	18.44
19	...	9.65	26	...	24.14	July 13	6.7	20.98	11	...	18.41
$\alpha$ Columbae.			Feb. 6	...	24.32	26	...	20.70	23	...	18.31
		5.34	22	...	24.27	$\eta$ Leporis.			Feb. 9	...	18.43
Jan. 28	...	30.69	B.A.C. 1865.					5.49	$\kappa$ Aurigæ.		
Feb. 1	...	31.02			5.44	Jan. 23	...	56.15			6.6
$\circ$ Aurigæ.			Feb. 18	...	30.13	Feb. 18	...	56.40	Feb. 22	...	19.77
		5.34	$\beta$ Columbae.			59 Orionis.			24	...	19.91
Feb. 6	...	54.26			5.45			5.51	71 Orionis.		
19	...	54.14	Feb. 4	...	57.45	Jan. 11	6.7	2.02			6.6
B.A.C. 1809.					5.36	Feb. 4	6.5	1.93	Jan. 13	5.5	29.55
		15.24			5.36	8	6.3	2.03			

72 Orionis.			β Canis Majoris.			8 Lyncis.			B.A.C. 2175 (2nd)		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		6. 7			6. 16			6. 24			6. 32
Jan. 21	6.0	13.86	Jan. 21	...	26.99	Jan. 21	6.3	42.29	Jan. 26	9.5	18.13
Feb. 8	5.7	13.76	23	...	26.82	Feb. 1	6.0	42.19	Feb. 1	9.7	18.15
			27	...	26.95				19	...	18.46
R.H.C. 889.			B.A.C. 2072.			10 Lyncis.			B.A.C. 2183.		
		6. 7			6. 17			6. 25			6. 32
July 19	9.5	16.88			53.02	Jan. 9	7.0	33.58	Feb. 22	...	29.03
30	9.5	18.61	Feb. 4	...		21	7.5	33.25	25	...	28.84
43 Aurigæ.			R.H.C. 920.			B.A.C. 2147.			51 Cephei (Hev.)		
		6. 7			6. 18			6. 27			6. 32
Jan. 20	6.5	41.39	July 30	10.0	25.86	Feb. 1	...	20.44	Jan. 25	...	38.57
5 Monocerotis.			6 Lyncis.			22	...	20.61	Feb. 4	5.5	38.89
		6. 7			6. 18	26	...	20.50	8	5.3	38.40
Feb. 9	...	55.86	Feb. 1	6.0	26.87	41 Camelopardali.			9	...	38.48
74 Orionis.			48 Aurigæ.					6. 27	18	5.7	39.42
		6. 8			6. 19	Jan. 11	7.0	22.94	July 17	...	39.23
Feb. 18	6.0	28.34	Feb. 22	6.0	26.40	ξ2 Canis Majoris.			19	...	39.57
l Orionis.			78 Orionis.					6. 29	21	5.5	38.96
		6. 9			6. 19	Jan. 18	...	6.43	28	...	38.69
Feb. 22	6.5	16.87	Jan. 21	6.3	60.00	B.A.C. 2162.			29	...	38.86
45 Aurigæ.			Feb. 26	6.0	59.94			6. 29	Aug. 3	5.5	38.54
		6. 10	γ Geminorum.			Jan. 23	...	19.57	6	5.3	38.82
Jan. 11	6.0	13.69			6. 20	Feb. 24	...	19.68	12 Lyncis (1st star)		
23	6.0	13.62	Jan. 27	...	31.87	27	...	19.75			6. 33
Feb. 1	5.7	13.65	Feb. 9	...	31.84	γ Geminorum.			Jan. 18	7.5	39.98
8	6.0	13.76	7 Lyncis.					6. 29	20	7.5	39.90
R.H.C. 897.					6. 22	B.A.C. 2175 (1st)			12 Lyncis (2nd star)		
		6. 11	Jan. 9	6.7	43.71			6. 29			6. 33
Aug. 5	8.3	38.70	9 Lyncis.			Jan. 13	...	30.51	Jan. 26	5.5	40.94
6	8.5	40.65			6. 24	20	...	30.57	13 Lyncis.		
μ Geminorum.					6. 22	B.A.C. 2175 (1st)					6. 34
		6. 14	Jan. 9	6.7	43.71			6. 32	Feb. 24	6.0	42.88
Jan. 1	...	22.08	9 Lyncis.			Jan. 11	7.3	17.48	27	5.7	42.62
21	...	22.14			6. 24	13	7.3	17.47	ε Geminorum.		
Feb. 1	...	22.11	Jan. 18	6.5	2.97			6. 32			6. 35
			20	6.7	3.05			6. 32	Feb. 6	...	11.69
								6. 32	22	...	11.68

56 Aurigæ (1st star)			B.A.C. 2244.			B.A.C. 2317.			B.A.C. 2359.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		6. 36			6. 44			6. 58			7. 4
Jan. 21	6.0	29.99	Jan. 11	7.51	25.43	Feb. 8	6.5	14.45	Feb. 24	8.0	42.42
Feb. 1	6.0	29.97	18	...	25.64	22	6.5	14.53	27	7.7	42.42
						27	6.5	14.91			
56 Aurigæ (2nd star)			38 Geminorum.			B.A.C. 2331.			52 Geminorum.		
		6. 36			6. 46			7. 0			7. 6
Jan. 21	8.7	31.69	Jan. 26	...	37.96	Jan. 26	...	16.17	Jan. 23	6.5	0.57
23	8.5	31.74	Feb. 8	5.3	37.94	Feb. 20	7.3	16.34	Feb. 22	6.3	0.83
ξ Geminorum.			62 Aurigæ.			(R) Canis Minoris.			44 Camelopardali.		
		6. 37			6. 49			7. 0			7. 6
Feb. 22	...	19.05	Feb. 18	6.7	22.04	Jan. 21	8.3	53.94	Jan. 26	...	19.67
43 Camelopardali.			39 Geminorum.			23	9.3	53.83	Groombridge 1119.		
		6. 38			6. 50	τ Geminorum.					7. 7
Jan. 11	5.3	21.89	Feb. 20	6.5	2.16			7. 2	Aug. 19	...	35.36
18	5.5	22.35	22	7.0	2.21	Jan. 26	...	5.85	20	7.3	34.14
Sirius.			ε Canis Majoris.			27	...	5.90	B.A.C. 2383.		
		6. 38			6. 53	R.H.C. 1029.					7. 8
Feb. 6	...	53.37	Jan. 11	...	2.92			7. 2	Feb. 20	...	15.39
9	...	53.34	B.A.C. 2303.			Feb. 4	7.5	24.42	24	7.0	15.39
19	...	53.54			6. 55	Mar. 5	7.5	23.86	25	6.7	15.42
Mar. 6	...	53.59	Jan. 21	...	24.46	B.A.C. 2347.			B.A.C. 2377.		
B.A.C. 2217.			Feb. 20	...	24.76			7. 3			7. 8
		6. 39	ζ Geminorum.			Feb. 22	7.7	10.31	Feb. 18	6.7	36.17
Feb. 22	7.3	51.87			6. 55	24	7.7	10.34	Mar. 6	7.0	36.74
25	7.3	52.03	Jan. 25	...	40.93	Mar. 6	7.7	10.23	8	6.7	36.93
26	7.0	51.82	28	...	41.20	8	7.5	10.26	47 Camelopardali.		
27	7.3	51.78	22 Canis Majoris.			20 Monocerotis.					7. 9
58 Aurigæ.					6. 56			7. 3	Feb. 27	6.3	49.76
		6. 40	Feb. 1	...	3.99	Mar. 9	5.7	10.47	B.A.C. 2399.		
Jan. 20	...	43.32	Mar. 6	...	3.89	18 Lyncis.					7. 9
Feb. 24	5.5	43.35	γ Canis Majoris.					7. 3	Mar. 9	...	51.52
59 Aurigæ.					6. 57	Feb. 8	5.7	29.75	λ Geminorum.		
		6. 43	Jan. 26	...	20.12	18	5.5	29.90			7. 9
Feb. 1	6.3	15.07				19	...	29.81	Feb. 20	...	55.86
8	6.7	14.95				20	5.5	29.55	24	4.0	55.77

δ Geminorum.			α <sup>1</sup> Geminorum.			B.A.C. 2517.			Groombridge 1359.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		7 <sup>s</sup> 11			7 <sup>s</sup> 25			7 <sup>s</sup> 30			7 <sup>s</sup> 42
Jan. 26	...	38 <sup>m</sup> 41	Feb. 20	...	31 <sup>m</sup> 56	Mar. 6	7 <sup>h</sup> 0	48 <sup>m</sup> 93	Feb. 20	...	22 <sup>m</sup> 37
27	...	38 <sup>m</sup> 33	22	...	31 <sup>m</sup> 59	8	7 <sup>h</sup> 0	48 <sup>m</sup> 75	22	6 <sup>h</sup> 7	23 <sup>m</sup> 08
B.A.C. 2420.			27	...	31 <sup>m</sup> 65	Procyon.			24	6 <sup>h</sup> 7	23 <sup>m</sup> 10
		7 <sup>s</sup> 13	Mar. 9	...	31 <sup>m</sup> 60				25	6 <sup>h</sup> 7	22 <sup>m</sup> 75
Feb. 22	...	3 <sup>m</sup> 90	Castor.			Jan. 21	...	7 <sup>s</sup> 31	Mar. 5	6 <sup>h</sup> 5	22 <sup>m</sup> 35
24	...	3 <sup>m</sup> 90			7 <sup>s</sup> 25	Feb. 18	...	52 <sup>m</sup> 02	9	6 <sup>h</sup> 7	22 <sup>m</sup> 85
25	...	4 <sup>m</sup> 12	Mar. 11	...	32 <sup>m</sup> 19	20	...	52 <sup>m</sup> 17	11	...	22 <sup>m</sup> 60
Mar. 8	...	4 <sup>m</sup> 16	B.A.C. 2489.			Mar. 11	...	52 <sup>m</sup> 12	B.A.C. 2559.		
B.A.C. 2443.					7 <sup>s</sup> 26	W. B. vii. 990.					7 <sup>s</sup> 43
		7 <sup>s</sup> 16	Feb. 18	6 <sup>h</sup> 0	7 <sup>m</sup> 17			7 <sup>s</sup> 32	Feb. 4	6 <sup>h</sup> 0	3 <sup>m</sup> 98
Feb. 4	...	45 <sup>m</sup> 63	Mar. 6	6 <sup>h</sup> 0	7 <sup>m</sup> 03	Mar. 23	8 <sup>h</sup> 0	14 <sup>m</sup> 29	8	5 <sup>h</sup> 5!	3 <sup>m</sup> 98
Mar. 6	...	45 <sup>m</sup> 76	υ Geminorum.			σ Geminorum.			ξ Argūs.		
ι Geminorum.					7 <sup>s</sup> 27			7 <sup>s</sup> 34			7 <sup>s</sup> 43
		7 <sup>s</sup> 16	Feb. 24	4 <sup>h</sup> 0	10 <sup>m</sup> 19	Feb. 9	...	25 <sup>m</sup> 97	Feb. 18	...	19 <sup>m</sup> 57
Jan. 23	...	54 <sup>m</sup> 05	Mar. 8	5 <sup>h</sup> 0	10 <sup>m</sup> 07	18	4 <sup>h</sup> 7	25 <sup>m</sup> 92	Mar. 6	...	19 <sup>m</sup> 43
26	...	54 <sup>m</sup> 24	23 Lyncia.			24	5 <sup>h</sup> 5	25 <sup>m</sup> 91	8	...	19 <sup>m</sup> 39
Feb. 8	...	53 <sup>m</sup> 98			7 <sup>s</sup> 29	27	...	26 <sup>m</sup> 11	φ Geminorum.		
18	...	54 <sup>m</sup> 07	Feb. 8	6 <sup>h</sup> 3	3 <sup>m</sup> 51	* N.P.D. 66° 23'.					7 <sup>s</sup> 44
24	4 <sup>h</sup> 5	54 <sup>m</sup> 26	22	6 <sup>h</sup> 3	3 <sup>m</sup> 63	Feb. 8	8 <sup>h</sup> 3	31 <sup>m</sup> 36	Feb. 9	...	48 <sup>m</sup> 04
B.A.C. 2453.			70 Geminorum.			22	8 <sup>h</sup> 7	31 <sup>m</sup> 60	B. Z. 279. 165.		
		7 <sup>s</sup> 18			7 <sup>s</sup> 29	Pollux.					7 <sup>s</sup> 46
Feb. 4	...	8 <sup>m</sup> 48	Feb. 27	...	13 <sup>m</sup> 39	Jan. 21	...	37 <sup>m</sup> 28	Mar. 22	8 <sup>h</sup> 5	45 <sup>m</sup> 25
22	...	8 <sup>m</sup> 72	Mar. 5	6 <sup>h</sup> 3	13 <sup>m</sup> 26	Feb. 4	...	37 <sup>m</sup> 13	23	9 <sup>h</sup> 0	45 <sup>m</sup> 21
22 Lyncia.			9	6 <sup>h</sup> 3	13 <sup>m</sup> 29	27	...	37 <sup>m</sup> 12	R.H.C. 1153.		
		7 <sup>s</sup> 19	ο Geminorum.			Mar. 8	...	37 <sup>m</sup> 38			7 <sup>s</sup> 51
Feb. 8	6 <sup>h</sup> 0	8 <sup>m</sup> 18			7 <sup>s</sup> 29	9	...	37 <sup>m</sup> 50	July 30	8 <sup>h</sup> 3	26 <sup>m</sup> 59
20	...	8 <sup>m</sup> 41	Feb. 9	...	53 <sup>m</sup> 39	11	...	37 <sup>m</sup> 24	* N.P.D. 118° 5'.		
B.A.C. 2466.			18	6 <sup>h</sup> 0	53 <sup>m</sup> 48	Radcliffe 2020.					7 <sup>s</sup> 53
		7 <sup>s</sup> 20	Radcliffe 1979.			Aug. 5	7 <sup>h</sup> 3	12 <sup>m</sup> 38	Feb. 8	8 <sup>h</sup> 5!	42 <sup>m</sup> 98
Feb. 22	...	16 <sup>m</sup> 21			7 <sup>s</sup> 29	13	7 <sup>h</sup> 5	12 <sup>m</sup> 70	Mar. 5	8 <sup>h</sup> 0!	43 <sup>m</sup> 25
24	...	16 <sup>m</sup> 11	Aug. 7	8 <sup>h</sup> 3	57 <sup>m</sup> 96	19	...	12 <sup>m</sup> 26	6	...	43 <sup>m</sup> 12
			9	8 <sup>h</sup> 3	57 <sup>m</sup> 08	25	7 <sup>h</sup> 7	12 <sup>m</sup> 86			
						30	7 <sup>h</sup> 5	11 <sup>m</sup> 71			

B.A.C. 2673.			Radcliffe 2099.			Radcliffe 2162.			$\rho^1$ Cancri.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		7.54			8.5			8.25			8.43
Feb. 9	...	52.66	Aug. 23	8.3	55.58	Mar. 6	7.5	48.48	Jan. 28	...	55.82
22	5.3	52.58				8	8.0	47.97	Feb. 18	6.5	55.92
Mar. 8	5.7	52.70	(R) Cancri.			B.A.C. 2898.			Mar. 6	6.3	55.87
$\psi^2$ Cancri.					8.8			8.29	$\rho^2$ Cancri.		
		8.1	Feb. 25	7.3	44.00			8.29			8.44
Feb. 1	...	53.64	Mar. 5	7.5	44.00	Feb. 22	6.3	27.90	Jan. 28	...	7.84
9	...	53.66	6	8.0	44.06	25	6.7	27.68	Feb. 18	6.3	8.04
16	...	53.69	8	7.7	43.90	Radcliffe 2189.			Mar. 17	6.5	7.87
22	5.0	53.78	9	7.7	43.96			8.34	6 Ursæ Majoris.		
Mar. 23	...	53.76	Groombridge 1418.			Aug. 27	...	37.01			8.44
24	6.5	53.74			8.13	$\gamma$ Cancri.			Mar. 23	6.3	24.07
B.A.C. 2734.			Mar. 23	...	33.82			8.35	24	6.5	24.24
		8.2	Groombridge 1437.			Jan. 28	...	3.74	R.H.C. 1285.		
Mar. 8	7.0	44.00			8.17	Feb. 16	...	3.86			8.44
9	6.7	44.00	Feb. 22	6.5	41.63	24	4.7	3.94	Mar. 22	9.0	44.01
$\zeta^1$ Cancri.			Mar. 8	7.0	41.52	25	5.0	3.90	B.A.C. 3025.		
		8.4	9	6.5	41.55	$\Sigma$ 1263 (1st star)					8.47
Feb. 9	...	4.03	$\nu^1$ Cancri (1st star)					8.35	Feb. 16	6.0	12.20
16	...	3.92			8.18	Feb. 22	8.0	47.42	Mar. 26	6.0	12.04
$\zeta^2$ Cancri.			Feb. 25	7.3	12.84	Mar. 5	8.3	47.27	60 Cancri.		
		8.4	Mar. 17	7.7	12.83	6	8.3	47.35			8.48
Mar. 5	6.0	4.12	22	7.7	12.80	Radcliffe 2198.			Jan. 28	...	10.05
6	6.5	4.20	24	7.5	12.74			8.37	Mar. 8	6.0	10.05
18 Puppis.			B.A.C. 2827.			Mar. 17	8.3	43.79	17 Hydræ (South)		
		8.4			8.18	$\Sigma$ 1280 (1st star)					8.48
Mar. 11	...	4.79	Feb. 24	6.0	56.09			8.41	Mar. 6	7.3	31.99
22	7.0	4.85	B.A.C. 2828.			Feb. 16	7.5	57.53	17	7.5	32.02
* N.P.D. 73° 3'.					8.18	24	8.0	57.30	23	7.3	32.11
		8.4	Feb. 24	8.7	59.09	25	8.0	57.40	17 Hydræ (North)		
Jan. 28	...	55.28	$\eta$ Cancri.			$\Sigma$ 1280 (2nd star)					8.48
Feb. 9	...	55.30			8.24			8.41	Mar. 24	7.7	32.00
18	6.7	55.37	Feb. 24	6.0	29.53	Feb. 22	8.3	57.88			8.48
			25	6.0	29.47	24	8.3	58.16			8.48
			Mar. 5	5.7	29.60	Mar. 5	8.7	57.96			8.48

(T) Hydræ.			$\pi^1$ Cancri.			41 Lyncis (1st star)			Radcliffe 2346.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Feb. 18	7.0	45.32	Feb. 25	6.7	31.25	Mar. 17	6.0	20.41	Sept. 18	9.5	35.79
22	7.5	45.47				23	5.7	20.52	22	...	36.74
24	7.3	45.43	$\Sigma$ 1321 (1st star).			$\lambda$ Ursæ Majoris.			B.A.C. 3245.		
25	7.5	45.42			9. 4			9. 20			9. 23
Mar. 5	7.8	45.14	Mar. 5	7.0	40.68	Mar. 8	...	17.41	Mar. 5	7.3	54.03
$\iota$ Ursæ Majoris.			8	7.5	40.61	9	...	17.45	8	7.7	54.32
		8.49	11	...	40.44	11	...	17.13	9	7.5	54.29
Feb. 16	...	28.14	$\Sigma$ 1321 (2d star).			B.A.C. 3226.			Radcliffe 2350.		
B.A.C. 3076.					9. 4			9. 20			9. 24
Feb. 18	6.0	1.40	Mar. 6	7.5	42.47	Mar. 5	6.0	44.77	Sept. 18	9.3	22.34
22	6.3	1.48	9	7.7	42.56	Apr. 10	5.3	44.58	22	...	22.64
25	6.3	1.40	22	7.5	42.45	22 Ursæ Majoris.			Radcliffe 2368.		
$\nu$ Cancri.			B.A.C. 3144.					9. 21			9. 30
		8.54			9. 6	Mar. 26	6.0	24.35	Mar. 24	7.7	53.45
Jan. 28	...	25.76	Mar. 23	6.5	30.73	29	6.0	24.77	29	8.0	54.07
Feb. 16	6.0	25.88	$\pi^2$ Cancri.			$\tau^1$ Hydræ (North).			Apr. 10	7.5	54.14
Mar. 5	5.7	25.79			9. 7			9. 21	12 Leonis.		
B.A.C. 3104.			Feb. 25	6.0	23.22	Mar. 24	7.3	56.75			9. 31
		8.58	Mar. 11	...	23.20	7 Leonis Minoris.			Feb. 25	7.0	2.57
Feb. 16	7.3	28.66	Radcliffe 2295.					9. 22	Mar. 6	7.5	2.53
18	8.3	28.60			9. 11	Mar. 6	6.0	7.64	$\iota$ Hydræ.		
Mar. 5	7.7	28.59	Mar. 26	8.5	3.08	April 3	6.7	7.69			9. 32
8	8.0	28.60	83 Cancri.			Radcliffe 2343.			Mar. 22	...	36.13
$\tau$ Ursæ Majoris.					9. 11	Aug. 28	8.5	49.57	23	...	36.02
		8.59	Feb. 25	6.7	3.21	Sept. 1	8.0	50.12	24	...	36.26
Mar. 6	5.5	10.15	Mar. 5	6.7	3.25	18	8.0	49.43	26	...	36.32
$\xi$ Cancri.			24	7.0	3.04	22	...	49.24	29	...	36.14
		9. 1	Radcliffe 2320.			8 Leonis Minoris.			$f$ Leonis.		
Feb. 16	5.5	11.18			9. 15			9. 22			9. 35
24	6.0	11.22	Mar. 22	8.7	47.02	Mar. 11	6.3	53.08	Feb. 25	6.0	13.36
Apr. 3	6.0	11.56	24	9.3	46.64	17	5.7	53.33	Mar. 6	6.0	13.36
			29	8.5	47.19	23	5.5	53.32			
			April 3	8.7	46.92						



14 Leonis Minoris.			ν Leonis.			λ Ursæ Majoris.			B.A.C. 3566.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		9. 37			9. 50			10. 8			10. 19
Mar. 22	7.0?	36.51	Mar. 29	5.3	34.74	Apr. 17	...	31.18	Mar. 26	8.0	10.51
19 Leonis.			April 3	5.7	34.88	35 Leonis.			B.A.C. 3567.		
			10	6.0	34.95			10. 8			10. 19
(R) Leonis.			π Leonis.			Mar. 6	6.3	40.29	Mar. 22	6.3	16.86
		9. 39			9. 52	11	...	40.16	23	6.5	16.75
Mar. 23	6.7	47.84	Mar. 8	4.7	42.43	23	6.3	40.12	24	...	16.76
24	6.7	47.62	9	5.7	42.38	37 Leonis.			45 Leonis.		
ν Ursæ Majoris.			11	...	42.48			10. 9			10. 20
			17	...	42.52	Apr. 20	6.3	3.17	Apr. 20	7.0?	8.79
Mar. 9	8.5	55.19	Apr. 10	...	42.28	39 Leonis.			36 Ursæ Majoris.		
29	7.3	55.07	Regulus.					10. 9			10. 21
April 3	7.0	55.17			10. 0	April 1	...	25.56	Mar. 17	5.0	30.72
μ Leonis.			Mar. 11	...	48.31	3	6.3	25.39	Apr. 15	...	30.84
		9. 40	14	...	48.45	10	6.3	25.53	17	...	30.98
Mar. 5	...	51.42	17	...	48.39	B.A.C. 3528.			B.A.C. 3627.		
6	...	51.54	22	...	48.39			10. 13			10. 28
7 Sextantis.			26	...	48.25	Mar. 17	5.0	22.95	Mar. 17	...	12.60
		9. 44	April 1	...	48.47	22	5.7	22.37	24	7.0?	12.57
Mar. 22	...	40.74	3	...	48.33	μ Ursæ Majoris.			Apr. 19	...	12.49
29	...	40.80	Groombridge 1618.					10. 13	B.A.C. 3628.		
April 3	...	40.78	Mar. 6	6.3	39.50	Mar. 24	...	51.27			10. 28
10	...	40.88	8	6.5	39.42	26	...	51.07	Apr. 20	8.0?	39.73
23 Leonis Minoris.			9	6.3	39.23	42 Leonis.			B.A.C. 3629.		
		10. 8	Groombridge 1620.					10. 14			10. 29
Mar. 17	6.0	9.95	Mar. 14	6.0	20.87	April 3	6.5	11.94	Mar. 22	6.5	14.52
22	...	9.97	24 Leonis Minoris.			15	...	11.84	B.A.C. 3645.		
Radcliffe 2404.					10. 8	17	...	11.99			10. 31
		9. 45	Mar. 24	7.0	24.69	30 Leonis Minoris.			Mar. 26	6.3	38.80
Sept. 13	6.5	14.43	26	7.0	24.85			10. 17	29	5.7	38.93
30	6.5	13.26	38 Ursæ Majoris.			Mar. 14	...	45.78			10. 32
Oct. 8	6.5	12.98			10. 8	April 1	...	45.83	Apr. 10	5.3	12.87
9	...	13.24	Mar. 24	7.0	24.69	15	...	45.88	15	...	13.26
13	...	13.60	26	7.0	24.85	17	...	45.84			
						20	5.7	45.80			

33 Sextantis.			B.A.C. 3747.			75 Leonis.			r Leonis.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		10. 34			10. 48			11. 9			11. 20
Apr. 19	...	10° 61	Mar. 29	6° 5	28° 06	Apr. 13	...	58° 90	Feb. 27	...	38° 17
21	6° 7	10° 99	Apr. 10	6° 0	27° 79	17	...	59° 00	Apr. 15	...	38° 30
(R) Ursæ Majoris.			a Crateris.			ξ <sup>1</sup> Ursæ Majoris.			23 5° 3 38° 10		
		10. 34			10. 52			11. 10			38° 18
Mar. 17	8° 0	32° 39	April 1	...	51° 63	Apr. 19	...	35° 82	58 Ursæ Majoris.		
22	7° 7	32° 37	13	...	51° 72	21	...	35° 92			11. 22
24	...	32° 16	17	...	51° 70	ξ <sup>2</sup> Ursæ Majoris.			Apr. 21	6° 5	49° 38
26	8° 3	32° 33	B.A.C. 3764.					11. 10	88 Leonis.		
29	8° 0	32° 43			10. 52	Mar. 26	...	36° 16			11. 24
April 1	8° 31	32° 44	Mar. 24	7° 7	52° 95	Apr. 23	...	36° 17	Mar. 29	6° 7	25° 32
Radcliffe 2560.			c Leonis.			B.A.C. 3861.			89 Leonis.		
		10. 41			10. 53			11. 13			11. 27
April 1	...	5° 75	Mar. 26	5° 7	23° 06	Apr. 13	...	39° 89	Apr. 23	5° 7	5° 93
17	...	6° 22	29	5° 5	23° 22	17	7° 31	39° 88	24	5° 7	5° 99
21	8° 7	5° 77	Lalande 21185.			B.A.C. 3863.			2 Draconis.		
23	8° 5	6° 48			10. 55			11. 14			11. 27
Sept. 24	...	5° 92	Mar. 22	7° 5	34° 05	Apr. 19	...	8° 90	Mar. 29	5° 3	40° 59
Oct. 5	9° 0	6° 13	23	7° 5	34° 05	e Leonis.			Apr. 17	...	40° 91
11	9° 0	5° 72	Apr. 21	7° 7	34° 05			11. 16	v Leonis.		
Nov. 9	8° 7	6° 57	23	7° 3	33° 96	Apr. 21	4° 7	31° 29			11. 29
l Leonis.			24	7° 5	34° 07	24	...	31° 23	Apr. 15	...	40° 70
		10. 41	χ Leonis.			e Crateris.			19	...	40° 86
Mar. 14	...	47° 54			10. 57			11. 17	59 Ursæ Majoris.		
23	6° 0	47° 53	Mar. 26	5° 0	41° 48	Apr. 13	...	26° 40			11. 30
24	...	47° 47	Apr. 13	...	41° 48	80 Leonis.			Apr. 21	6° 0	45° 73
29	6° 0	47° 55	β Crateris.					11. 18	62 Ursæ Majoris.		
April 3	...	47° 41			11. 4	Apr. 17	7° 01	32° 26			11. 34
B.A.C. 3741.					40° 84	20	7° 0	32° 08	Apr. 15	...	10° 49
		10. 47	Feb. 27	...	40° 83	83 Leonis (1st star).			17	...	10° 32
Mar. 24	5° 5	51° 76	Apr. 13	...	40° 75			11. 19	B.A.C. 3969.		
55 Leonis.			17	...	40° 74	Apr. 21	7° 5	34° 17			11. 34
		10. 48							Apr. 23	5° 0	39° 10
Apr. 17	...	24° 09									
23	5° 5	24° 18									

B.A.C. 3971.			B.A.C. 4024.			Groombridge 1850.			$\delta$ Ursae Majoris.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Apr. 19	...	11. 34 51.50	May 5	6.3	11. 47 29.56	May 5	6.5	11. 57 31.29	May 6	...	12. 8 22.79
20	7.71	51.50	B.A.C. 4037.			$\alpha$ Corvi.			B.A.C. 4130 (1st).		
Radcliffe 2738.					11. 49			12. 1			12. 9
Apr. 13	8.0	11. 36 40.88	Apr. 10	...	51.71	Apr. 10	...	5.97	Mar. 29	7.5	55.98
Nov. 10	8.0?	41.69	May 7	...	51.64	20	...	5.90	Apr. 10	7.3	55.91
11	...	41.42	$\delta$ Virginis.			21	...	5.94	20	7.5	55.91
18	8.3	41.03			11. 52	$\iota$ Virginis.			B.A.C. 4130 (2d).		
$\beta$ Leonis.			April 1	...	40.42			12. 2			12. 9
Apr. 15	...	11. 41 49.02	May 5	5.7	40.58	Apr. 24	...	24.90	Apr. 21	7.7	59.48
17	...	48.91	B.A.C. 4055.			$\epsilon$ Corvi.			23	7.5	59.70
19	...	48.84			11. 53	Mar. 29	...	49.85	May 5	7.3	59.54
20	...	48.78	Apr. 19	...	54.00	May 6	...	49.82	B.A.C. 4143.		
B.A.C. 4009.			23	...	54.27	7	...	49.70			12. 12
Apr. 10	5.0	11. 44 31.33	24	...	54.26	8	...	49.78	May 7	6.0	25.11
24	...	31.41	May 6	7.71	54.20	Oeltz. Arg. 12417.			8	...	24.98
Groombridge 1830.			$67$ Ursae Majoris.					12. 3	10	6.0	25.84
Mar. 29	6.5	11. 44 46.91	Apr. 13	5.5	11. 54 53.44	May 10	8.3	35.74	11	5.7	25.60
April 3	6.3	47.07	* N.P.D. $46^{\circ} 4'$ .			B.A.C. 4111.			$\eta$ Virginis.		
17	...	47.07			11. 55			12. 5			12. 12
21	6.7	47.07	Apr. 20	8.5	3.41	Apr. 10	6.7	4.82	Apr. 24	...	38.52
May 6	6.7	47.25	May 7	8.5	3.83	21	7.5	4.79	30	...	38.54
B.A.C. 4021.			B.A.C. 4059.			23	6.5	5.00	Groombridge 1871.		
Apr. 19	...	11. 46 47.37			11. 55	B.A.C. 4112.					12. 12
20	8.01	47.53	Mar. 29	...	16.28			12. 5	Apr. 15	...	41.02
* N.P.D. $51^{\circ} 9'$ .			May 7	6.5	16.25	May 5	5.5	29.51	$70$ Ursae Majoris.		
April 3	9.7	11. 47 2.38	B.A.C. 4064.			B.A.C. 4119.					12. 13
13	9.7	2.08			11. 56			12. 6	Apr. 17	...	57.11
21	9.7	2.38	April 1	...	29.71	May 7	7.3	59.08	Groombridge 1884.		
			10	7.0	29.53	8	...	59.17			12. 14
									Oct. 30	6.7	22.33

17 Virginis.			7 Can. Venat.			24 Comæ (2d star).			Groombridge 1923.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Apr. 20	7.3	18.82	Mar. 29	6.3	19.11	May 8	5.31	0.48	Apr. 19	...	15.47
21	7.0	19.03	Apr. 17	...	19.42	10	5.7	0.47	20	7.7	16.18
23	6.3	18.97	May 8	...	19.04	6 Draconis.			24	...	16.28
Groombridge 1889.			4 Draconis.					12. 28	7 Draconis.		
		12. 18			12. 23	Apr. 20	5.0	42.19			12. 41
May 5	8.7	6.70	Apr. 21	5.7	51.97	May 11	5.7	42.33	Mar. 29	6.0	45.24
7	8.7	7.05	May 11	5.0	52.09	B.A.C. 4250.			Apr. 30	...	45.23
Groombridge 1892.			Oeltz. Arg. 12731.					12. 29	May 3	5.7	45.23
		12. 19			12. 25	Apr. 21	7.3	56.41	B.A.C. 4306.		
May 6	8.3	23.39	Apr. 20	7.3	38.94	May 6	7.0	56.29			12. 42
10	8.3	24.13	May 6	7.7	39.06	χ Virginis.			May 6	7.5	46.43
72 Ursæ Majoris.			q Virginis.					12. 31	8	...	46.33
		12. 19			12. 26	Mar. 29	5.0	55.35	10	7.5	46.32
Mar. 29	7.0	44.11	Mar. 29	5.5	27.36	Apr. 10	4.7	55.22	11	7.5	46.38
Apr. 13	7.3	44.05	Apr. 23	6.0	27.37	19	...	55.35	32 Comæ.		
B.A.C. 4199.			β Corvi.			May 8	...	55.40			12. 45
		12. 20			12. 26	B.A.C. 4259.			May 3	6.5	8.55
Apr. 17	...	32.15	Apr. 17	...	56.18			12. 32	7	6.3	8.54
20	7.0	31.90	B.A.C. 4238.			Apr. 24	...	3.02	8	...	8.56
21	7.0	32.12			12. 27	May 7	9.0	3.00	33 Comæ.		
20 Comæ.			Apr. 21	7.3	17.65	10	9.3	2.95			12. 45
		12. 22	κ Draconis.			* N.P.D. 20° 41'.			Mar. 29	7.0	18.92
Apr. 23	6.0	35.12			12. 27			12. 32	Apr. 20	7.0	18.86
24	6.0	35.09	May 5	...	24.02	May 5	10.0	29.48	May 6	7.0	18.92
B.A.C. 4213.			11	4.0	24.18	γ Virginis (S. star).			10	7.3	19.04
		12. 22	23 Comæ.					12. 34	38 Virginis.		
May 5	7.0	46.13			12. 27	Apr. 23	...	28.18			12. 45
B.A.C. 4214.			May 7	4.5	46.38	30	...	28.14	Apr. 30	...	55.18
		12. 22	24 Comæ (1st star).			Oeltz. Arg. 12906.			ψ Virginis.		
May 7	6.3	51.96			12. 27			12. 35			12. 46
		5	May 8	7.01	59.05	May 5	9.3	10.18	Apr. 23	...	58.31
		5	10	7.3	58.93	11	9.3	10.61	May 5	5.3	58.41

ε Ursæ Majoris.			Groombridge 1947.			α Comæ.			57 Virginis.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		12. 47			12. 53			13. 3			13. 8
Apr. 17	...	46.35	Apr. 30	7.7	42.47	May 10	...	4.82	May 8	...	18.71
May 18	...	46.56	May 5	8.5	42.52	11	5.0	4.74	22	...	18.66
			6	8.0	42.57						
Groombridge 1937.			9 Draconis.			Oeltz. Arg. 13381.			ε Virginis.		
		12. 47			12. 54			13. 4			13. 9
Oct. 28	6.0	60.67	Apr. 23	5.7	32.78	Mar. 29	10.0	4.26	May 1	...	43.76
Nov. 22	6.0	59.44	May 7	5.7	32.70				3	6.0	43.67
Groombridge 1940.			78 Ursæ Majoris.			53 Virginis.			61 Virginis.		
		12. 48			12. 54			13. 4			13. 10
Oct. 28	5.3	8.57	May 11	5.5	37.59	May 8	...	30.57	Apr. 30	...	59.12
Nov. 22	5.5	9.27	18	5.5	37.69						
δ Virginis.			ε Virginis.			18 Can. Venat.			B.A.C. 4462.		
		12. 48			12. 55			13. 5			13. 13
May 3	...	27.16	Apr. 24	...	6.73	May 15	...	1.56	Mar. 29	...	23.62
6	...	27.11	May 8	...	6.46				May 7	7.5	23.70
7	...	27.04	10	...	6.53				8	...	23.53
8	...	27.06				β Comæ.					
12 Can. Ven. (1st).			9 Virginis.					13. 5			
		12. 49			13. 0	May 18	4.7	14.63			
May 10	6.5	21.76	Apr. 30	...	27.79				Oeltz. Arg. 13530.		
11	6.7	21.50									
12 Can. Ven. (2d).			B.A.C. 4392.			54 Virginis (1st).			May 10	7.5	29.38
		12. 49			13. 0			13. 5	11	7.3	29.46
Apr. 20	...	22.95	Apr. 23	6.3	45.94	May 11	7.5	51.95	15	7.0	29.20
May 12	...	22.97	May 5	6.0	45.80				18	7.3	29.61
8 Draconis.			6	6.5	46.05	54 Virginis (2d).					
		12. 49	7	6.5	45.90			13. 5	B.A.C. 4473.		
Apr. 30	...	48.44	Radcliffe 2967.			Apr. 30	8.0	52.23			13. 15
					13. 1	May 7	7.7	52.17	May 3	7.3	8.86
B.A.C. 4348 (1st).			May 3	8.0	37.13	11	8.0	52.14	5	7.3	8.78
		12. 50	θ Virginis.			55 Virginis.			6	7.0	8.89
May 18	8.0	3.46			13. 2			13. 6			
			Apr. 21	...	36.18	May 5	6.0	35.55	66 Virginis.		
			May 1	...	36.11	6	5.7	35.54			13. 17
			18	5.0	36.07	Groombridge 1971.			May 6	6.5	10.05
			22	...	36.16			13. 8	7	6.7	9.86
						Mar. 29	6.7	8.24	Spica.		
						May 10	7.0	8.17			13. 17
									Mar. 29	...	43.23

ζ <sup>1</sup> Ursæ Majoris.			ι <sup>1</sup> Virginis.			82 Ursæ Majoris.			89 Virginis.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		13. 18			13. 23			13. 34			13. 42
May 12	...	11 '96	Mar. 29	6 '3	1 '53	May 3	6 '0	0 '37	May 22	5 '7	9 '84
15	...	11 '86				5	6 '3	0 '57			
22	...	12 '07				6	6 '0	0 '66			
ζ <sup>2</sup> Ursæ Majoris.			W. B. xiii. 375.			7	6 '0	0 '37	B.A.C. 4628.		
		13. 18			13. 23	18	6 '3	0 '68			13. 44
May 10	...	13 '12	Apr. 30	8 '3	28 '68	Radcliffe 3075.			May 6	6 '0	53 '29
11	...	13 '06	B.A.C. 4515.					13. 35	B.A.C. 4634.		
15	...	12 '76			13. 24	May 1	...	30 '60			13. 45
g Ursæ Majoris.			May 22	7 '3?	29 '11	11	8 '0	30 '10	May 5	7 '0	43 '24
		13. 19	h Virginis.			B.A.C. 4577.			* N.P.D. 23° 19'.		
May 22	...	31 '72			13. 25			13. 37			13. 46
Groombridge 2007.			Mar. 29	...	29 '89	May 10	6 '3	4 '90	May 12	8 '3	29 '20
		13. 20	B.A.C. 4527.			22	6 '5	4 '83	η Boötis.		
Nov. 8	...	32 '38			13. 25	85 Virginis.					13. 47
Dec. 4	7 '5	32 '07	May 12	...	47 '14			13. 37	May 11	...	55 '59
B.A.C. 4496.			W. B. xiii. 438.			May 3	6 '7	56 '80	18	...	55 '50
		13. 20			13. 26	5	...	56 '83	Lalande 25653.		
May 10	7 '7	59 '81	Apr. 30	7 '5	51 '65	Rümker 4459.					13. 49
B.A.C. 4497.			ζ Virginis.					13. 39	May 5	6 '5	52 '38
		13. 21			13. 27	May 6	...	55 '44	6	6 '5	52 '55
May 5	6 '5	8 '29	May 1	...	27 '58	7	6 '7	55 '29	22	6 '7	52 '36
70 Virginis.			10	...	27 '59	12	...	55 '35	B.A.C. 4658.		
		13. 21	24 Can. Venat.			84 Ursæ Majoris.					13. 50
May 3	6 '0	29 '05			13. 28			13. 41	May 12	7 '5	50 '49
(R) Hydræ.			May 22	5 '0	38 '68	May 10	6 '0	17 '53	48 Hydræ.		
		13. 21	B.A.C. 4555.			η Ursæ Majoris.					13. 52
May 7	6 '5	57 '75			13. 31			13. 41	May 18	...	3 '64
B.A.C. 4502.			Apr. 30	6 '5	37 '93	May 3	...	56 '38	τ Virginis.		
		13. 21	May 7	7 '0	37 '68	5	...	56 '57			13. 54
May 6	6 '5	57 '88	22	7 '0	37 '89	11	...	56 '59	May 6	...	25 '42
						12	...	56 '43	7	...	25 '50
						18	...	56 '67			

B.A.C. 4682.			B.A.C. 4711.			$\theta$ Boötis.			54 Hydræ (1st star).		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		13. 57			14. 5			14. 20			14. 37
May 12	7.5	30.18	May 7	6.7	6.85	May 12	...	21.57	June 11	6.0	47.68
22	...	30.29				June 11	...	21.66			
Piazzi xiii. 291.			B.A.C. 4722.			R.H.C. 2165.			54 Hydræ (2d star).		
		13. 57			14. 7			14. 25			14. 37
May 11	8.5	40.91	May 25	...	35.04	June 11	8.3	8.05	June 11	8.0	48.18
$\pi$ Hydræ.			$\kappa^1$ Boötis.			$\rho$ Boötis.			$\epsilon^2$ Boötis.		
		13. 58			14. 8			14. 25			14. 38
May 7	...	17.68	May 7	7.0	22.47	May 12	...	42.45	June 5	...	47.20
18	...	17.84	$\kappa^2$ Boötis.			June 1	...	42.60	R.H.C. 2207.		
June 12	...	17.64			14. 8	B.A.C. 4826.					14. 39
Oeltz. Arg. 14246.			May 11	4.7	23.71			14. 28	June 7	9.5	51.59
		13. 59	Arcturus.			May 22	7.5	50.97	R.H.C. 2206.		
May 25	...	16.75			14. 9	25	7.5	51.10			14. 39
W.B. xiii. 1058.			May 15	...	11.16	B.A.C. 4828.			June 7	9.0	52.84
		14. 0	B.A.C. 4732.					14. 29	58 Hydræ.		
May 7	9.3	18.13	June 12	...	26.36	June 7	6.7	26.86			14. 41
B.A.C. 4700.			4 Ursæ Minoris.			Radcliffe 3250.			June 11	...	57.74
		14. 3			14. 9			14. 31	$\alpha^2$ Libræ.		
May 25	...	5.63	June 12	...	27.82	May 18	9.3	30.30			14. 43
June 12	...	5.57	18 Boötis.			$\pi^2$ Boötis.			May 18	...	1.77
B.A.C. 4707.					14. 12	May 22	6.3	3.70	28	...	1.81
		14. 4	May 11	6.0	24.11	25	6.5	3.60	$\xi^1$ Boötis.		
May 11	8.0?	26.33	2 Libræ.			June 5	...	3.80			14. 44
Groombridge 2099.					14. 15	B.A.C. 4848.			June 9	...	50.13
		14. 4	May 11	6.7	47.63			14. 34	$\xi^2$ Boötis.		
May 15	...	43.73	12	6.7	47.39	June 7	7.3	20.47			14. 44
22	7.3	44.41	B.A.C. 4773.			$\mu$ Virginis.			June 9	...	50.58
Nov. 17	7.5	43.72			14. 17			14. 35	6 Ursæ Minoris.		
23	...	44.98	June 1	7.0	7.71	June 11	...	35.05			14. 45
97 Virginis.									June 7	7.5	8.22
		14. 4									
May 12	7.3	59.72									

* N.P.D. 101° 47'.			B.A.C. 4962.			Groombridge 2213.			B.A.C. 5066.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		14 45			14 57			15 6			15 15
June 11	7 7	10 06	June 7	7 0	42 74	June 5	...	25 98	June 1	8 0?	32 07
ξ 2 Libræ.			ψ Boötis.			11	6 7	26 20	11 Ursæ Minoris.		
		14 49			14 58	12	6 7	25 46			15 17
May 25	...	4 30	June 9	...	21 68	δ Boötis.			June 15	5 3	14 16
B.A.C. 4923 (1st).			11	...	21 70	May 25	...	15 9	μ Boötis.		
		14 49	9 Ursæ Minoris.			June 1	...	46 63			15 19
June 1	8 7	10 04			15 0	7	...	46 69	May 25	...	7 63
7	9 3	10 19	May 22	6 7	18 08	5 Serpentis.			June 11	...	7 51
B.A.C. 4923 (2d).			June 10	...	17 86				14	...	7 52
		14 49	κ Boötis.			June 15	5 7	15 12	ζ 1 Libræ.		
June 7	6 0	11 17			15 0	22	...	4 03			15 20
9	...	11 14	May 25	5 7	43 69	Radcliffe 3354.			June 2	...	15 28
16 Libræ.			c Boötis.			June 9	8 5	15 12	γ Ursæ Minoris.		
		14 49			15 1	10	...	13 40			15 20
June 11	...	46 48	June 11	5 3	3 87	11	8 0	13 15	June 9	...	58 76
β Ursæ Minoris.			12	5 5	3 94	12	8 0	12 92	ι Draconis.		
		14 51	ε 1 Libræ.			14	8 3	12 56			15 21
May 22	...	9 49	May 25	...	7 94	R.H.C. 2288.			May 25	...	46 56
* N.P.D. 99° 49'.			28	...	8 14	June 11	9 3	15 13	June 11	...	46 56
		14 55	June 7	5 3	8 19	12	9 3	15 69	Groombridge 2283.		
June 9	8 0?	11 18	9	5 7?	8 29	14	9 3	16 17			15 24
11	7 5	11 12	10	...	8 19	Radcliffe 3362.			Jan. 4	7 0	48 45
20 Libræ.			23 Libræ.						11	7 3	47 32
		14 55			15 5	June 2	...	15 14	June 10	...	49 02
May 25	...	46 12	May 22	...	11 47				Dec. 2	7 5	49 60
β Boötis.			June 1	7 5?	11 29	B.A.C. 5064.			18	7 0	50 34
		14 56	ι 2 Libræ.			May 25	8 0	15 15	22	...	50 99
June 1	...	35 83			15 43	June 7	8 0	2 64	29	...	51 04
12	...	35 76	May 28	...	14 41	Oeltz. Arg. 15453.					15 27
			June 7	6 5	14 41				June 1	8 5	39 07
			9	7 0?	14 51				17	8 7?	38 99
			10	...	14 39						



$\delta$ Serpentis (North).			$\zeta^1$ Coronæ.			(R) Coronæ.			$\gamma$ Serpentis.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		15. 28			15. 34			15. 42			15. 49
June 7	...	1. 31	June 2	...	1. 43	June 14	6. 5	43. 56	June 18	...	53. 79
21	...	1. 25	9	6. 7	1. 47	17	...	43. 49	21	...	53. 98
$\delta$ Serpentis (South).			10	6. 5	1. 33	18	6. 7	43. 43	$\delta$ Scorpii.		
		15. 28	15	6. 3	1. 39	22	6. 5	43. 43			
June 7	...	1. 28	$\zeta^2$ Coronæ.			23	6. 7	43. 36	June 22	...	15. 51
14	...	1. 29				$\epsilon$ Serpentis.			23	...	56. 71
R.H.C. 2333.			June 2	...	15. 34			15. 43	$\delta$ Herculis.		
		15. 29	9	5. 3	1. 85	June 5	...	44. 29			15. 54
June 11	9. 0	15. 91	10	5. 3	1. 99	21	...	44. 34	June 17	...	51. 83
18	9. 0	13. 45	R.H.C. 2342.			$\alpha$ Scorpii.			18	...	51. 44
$\tau^b$ Serpentis.								15. 45	B.A.C. 5318.		
		15. 29	June 7	8. 0	42. 86	June 11	5. 5	5. 78			15. 55
June 23	6. 0	56. 70	23	8. 0	42. 23	$\theta$ Libræ.			June 11	...	44. 35
$41$ Libræ.			B.A.C. 5188.					15. 45	14	...	44. 42
		15. 30				June 14	...	44. 82	23	...	44. 17
June 2	...	44. 58	June 1	7. 0	27. 52	17	...	44. 79	25	...	44. 33
B.A.C. 5163.			14	6. 5	27. 61	$\kappa$ Coronæ.			$51$ Libræ. (1 & 2 as one mass.)		
		15. 31	$\psi$ Serpentis.					15. 45			15. 56
June 14	...	0. 63				June 10	...	52. 95	June 22	4. 7	33. 84
15	...	0. 54	June 11	6. 0	53. 57	$\chi$ Herculis.			$51$ Libræ (3rd star).		
$42$ Libræ.			15	6. 0	53. 63			15. 47			15. 56
		15. 31	$\alpha$ Serpentis.			June 9	...	45. 94	June 22	8. 0	34. 44
June 1	6. 0	53. 62				11	5. 3	45. 99	$\beta^1$ Scorpii.		
5	...	53. 77	June 2	...	15. 37	15	...	45. 89			15. 57
B.A.C. 5167.			5	...	16. 51	$\rho$ Scorpii.			May 27	...	11. 15
		15. 32	18	...	16. 58			15. 48	June 10	...	11. 16
June 11	...	51. 20	21	...	16. 48	June 23	...	7. 66	$\beta^2$ Scorpii.		
$\kappa$ Libræ.			$b$ Scorpii.			Radcliffe 3475.					15. 57
		15. 33						15. 49	June 18	...	11. 70
June 17	...	46. 42	June 1	...	15. 42	June 7	7. 3	42. 88	$\theta$ Draconis.		
21	...	46. 50									15. 59
22	...	46. 41							June 24	...	13. 86

B.A.C. 5346.			$\sigma$ Coronæ.			Antares.			B.A.C. 5595.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		15. 59			16. 9			16. 20			16. 35
June 14	6.7	24.65	May 27	...	21.72	June 7	...	42.48	June 15	7.0	5.89
23	...	24.66	June 29	6.5	21.82	22	...	42.55	30	7.5	5.93
25	7.5	24.60				23	...	42.61	July 1	7.0	6.04
						24	...	42.54			
13 Scorpil.			B.A.C. 5453.			$\eta$ Draconis.			15 Ophiuchi.		
		16. 3			16. 13			16. 22			16. 36
June 7	...	34.24	June 11	7.7	47.39	June 12	...	4.45	May 27	...	36.62
11	...	33.94				14	...	4.25	July 1	6.7	36.69
14 Herculis.			19 Ursæ Minoris.			R.H.C. 2463.			B.A.C. 5611.		
		16. 5			16. 14			16. 23			16. 36
June 9	...	48.13	May 28	...	55.83	June 25	9.7	19.28	June 28	6.5	48.68
14	6.3	48.00	June 17	...	55.94	28	9.7	19.82	29	6.7	48.60
17	...	48.14									
Radcliffe 3522.			$\gamma$ Herculis.			B.A.C. 5527.			25 Scorpil.		
		16. 6			16. 15			16. 24			16. 38
Jan. 23	...	35.50	June 23	...	39.32	June 18	...	23.67	June 14	6.7	10.16
May 28	...	36.48	29	...	39.51	22	6.0	23.76			
June 18	7.0	36.50				24	5.7	23.68	R.H.C. 2501.		
22	7.5	36.14				29	5.7	23.88			16. 39
24	7.7	36.50				30	5.5	23.63	June 25	7.3	44.20
30	7.5	36.12							30	7.5	44.56
49 Serpentis (1st).			B.A.C. 5465.			$\tau$ Scorpil.			$\epsilon$ Scorpil.		
		16. 6			16. 15			16. 27			16. 40
June 11	8.0	41.44	June 18	...	46.73	June 11	...	2.99	June 29	...	58.77
25	7.7	41.25	28	8.0?	46.88	12	...	3.03			
49 Serpentis (2d).						14	...	3.07	* N.P.D. 115° 34'.		
		16. 6				15	...	3.12			16. 45
June 11	7.5	41.51							May 27	...	48.99
25	7.5	41.39				B.A.C. 5579.			R.H.C. 2517.		
29	8.0	41.69						16. 33			16. 46
$\delta$ Ophiuchi.						May 27	...	21.86	June 28	8.5	57.21
		16. 6									
June 10	...	54.46				R.H.C. 2494.			$\kappa$ Ophiuchi.		
12	...	54.36						16. 34			16. 50
						June 24	8.7	23.53	June 15	...	56.83
						25	9.5	25.29	July 1	...	56.94
						28	9.0	25.83			



Radcliffe 3796.			R.H.C. 2698.			40 Draconis.			109 Herculis.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		17.47			17.57			18.10			18.17
Feb. 1	9.7	28.76	July 29	9.3	48.33	July 28	...	39.58	June 28	...	38.73
July 17	9.3	29.55	30	9.0	47.39	Aug. 3	5.7	39.09			
B.A.C. 6059.			Aug. 5	9.5	49.18	41 Draconis.			38 Draconis.		
		17.47	70 Ophiuchi (1st).					18.10			18.17
July 30	8.0	32.75			17.58	July 28	...	45.66	July 17	6.5	48.80
Radcliffe 3798.			July 13	...	16.82	Aug. 3	5.5	45.58	8 Ursæ Minoris.		
		17.48	17	...	16.60	8 Sagittarii.					18.18
Jan. 1	...	1.30	70 Ophiuchi (2d).					18.11	June 28	...	9.55
21	8.7	1.73			17.58	June 25	...	54.37	λ Sagittarii.		
Feb. 1	8.3	2.50	July 13	...	17.17	Aug. 7	...	54.42			18.19
July 13	8.5	2.65	12 Sagittarii.			B.A.C. 6218.			June 25	...	12.54
17	8.3	2.32			18.4			18.12	Aug. 7	...	12.56
B.A.C. 6065.			June 25	7.0	25.23	July 29	6.3	36.52	B.A.C. 6288.		
		17.48	July 17	7.0	25.18	30	6.5	36.55			18.21
July 19	6.7	9.14	21	7.5	25.19	7 Serpentis.			Aug. 6	7.0	18.58
28	6.7	9.17	B.A.C. 6184.					18.13	B.A.C. 6292.		
5 Sagittarii.					18.7	July 13	...	57.75			18.22
		17.51	July 13	7.3	30.46	21	...	57.74	June 28	7.0	59.37
July 19	7.3	29.37	17	7.0	30.57	ε Sagittarii.			July 13	6.7	59.45
21	7.3	29.52	Aug. 7	7.0	30.39			18.14	17	6.7	59.53
ξ Herculis.			B.A.C. 6185.			July 17	...	44.95	Aug. 7	7.0	59.48
		17.52			18.7	Aug. 7	...	45.29	24 Ursæ Minoris.		
July 29	4.3	14.59	July 28	6.3	36.91	108 Herculis.					18.23
30	...	14.78	29	6.5	36.70			18.15	Jan. 25	...	19.70
ζ Serpentis.			Aug. 6	6.5	37.01	June 28	6.0	28.76	26	6.0	20.66
		17.52	B.A.C. 6201 (1st).			Aug. 3	6.0	28.99	Feb. 8	6.0	19.53
Aug. 5	...	58.98			18.10	B.A.C. 6245.			18	6.5	20.49
R.H.C. 2693.			July 17	7.0	23.00			18.16	July 21	6.3	20.13
		17.56	19	7.3	23.04	July 13	5.3	32.57	29	6.0	20.29
July 19	9.0	18.65	B.A.C. 6201 (2d).			Radcliffe 3921.			Aug. 3	6.3	19.51
26	...	18.17			18.10			18.17	9	6.0	19.46
28	8.3	19.02	July 21	8.3	24.19	Jan. 18	7.5	23.16	13	6.0	20.59
29	8.3	18.66	29	8.3	23.91	20	8.0	23.69			
30	8.3	18.12				July 19	7.7	23.77			

B.A.C. 6304.			ε <sup>1</sup> Lyræ (1st star).			ν <sup>2</sup> Lyræ.			B.A.C. 6505.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
July 19	7.5	33.66	July 14	...	37.81	Aug. 5	6.3	34.83	July 29	8.0	2.68
30	7.5	33.84	17	...	37.89	7	6.0	34.66	30	8.3	2.72
42 Draconis.			19	5.3	37.94	β <sup>1</sup> Lyræ.			16 Lyræ.		
		18.25	30	5.3	37.95			18.44			18.57
Aug. 5	5.5	34.46	ε <sup>1</sup> Lyræ (2d star).			July 14	...	50.28	Aug. 5	5.5	25.31
					18.39	17	...	50.21	7	5.7	24.98
25 Sagittarii.			July 14	...	38.06	β <sup>2</sup> Lyræ.			13	5.7	25.18
		18.25	17	...	38.07			18.44	20	6.0	25.33
July 19	7.0	51.67	19	6.5	38.09	July 17	7.0	52.03	τ Sagittarii.		
1 Aquilæ.			30	6.5	38.11	19	7.5	52.12			18.58
			ε <sup>2</sup> Lyræ (1st star).			21	7.7	52.11	Aug. 9	...	4.58
June 28	...	28.95			18.39	28	8.0	52.21	ζ Aquilæ.		
July 14	5.0	28.94	Aug. 5	5.7	40.08	29	7.7	52.04			18.58
17	...	28.86	7	...	40.29	13 Lyræ.			July 30	...	53.15
Aug. 7	4.5	28.78	9	...	40.30			18.51	Aug. 3	...	52.98
20	5.0	28.72	23	...	40.41	July 28	4.5	0.71	(R) Aquilæ.		
B.A.C. 6347.			ε <sup>2</sup> Lyræ (2d star).			29	4.7	0.74			18.59
		18.30			18.39	30	4.3	0.81	July 28	7.3	31.81
July 14	...	25.44	Aug. 5	5.0	40.41	Aug. 3	4.5	0.83	29	7.0	31.94
Aug. 9	6.3	25.56	9	...	40.62	ζ Sagittarii.			R.H.C. 2882.		
13	6.3	25.49	13	...	40.54	Aug. 9	...	18.53	Feb. 9	...	19.0
			23	...	40.85	Sept. 1	...	34.63	...	...	41.38
α Lyræ.			B.A.C. 6396.			γ Lyræ.			July 14	6.7	41.08
		18.32			18.40			18.53	Aug. 19	...	41.86
Aug. 19	...	8.04	Aug. 3	8.3?	44.84	July 14	...	37.89	23	6.7	43.25
φ Sagittarii.			111 Herculis.			Aug. 7	...	37.86	Lalande 35819-20.		
		18.36			18.40	R.H.C. 2859.					19.0
Aug. 19	...	47.04	Aug. 19	...	45.07	Feb. 18	9.5	44.53	Aug. 5	6.5	43.26
Radcliffe 4069.			20	5.3	45.08	24	9.0	43.20	6	6.0	43.30
		18.39	ν <sup>1</sup> Lyræ.			25	9.3	43.19	7	6.0	42.97
June 25	7.7	15.02			18.44	26	9.0	43.96	B.A.C. 6563.		
July 26	...	15.14	July 30	6.3	28.78	Mar. 5	...	44.80			19.3
			Aug. 3	6.0	28.88				Aug. 13	...	52.73
									27	6.3	52.79
									Sept. 1	6.7	52.48

B.A.C. 6562.			$\delta$ Aquilæ.			B.A.C. 6712.			$c^2$ Cygni.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		19. 4			19. 18			19. 28			19. 38
July 21	6.7	28.94	July 21	...	20.16	June 30	6.5	46.17	Aug. 6	6.3	5.36
Aug. 3	6.0	28.82	26	...	20.32	July 14	6.0	46.27	9	6.0	5.11
9	6.0	29.16	Aug. 6	...	20.18	Aug. 23	6.5	46.64	15 Cygni.		
B.A.C. 6567.			13	...	20.40	Sept. 1	6.5	46.47			
			25	...	20.22	42 Aquilæ.					
		19. 5	B.A.C. 6652.					19. 30			19. 39
Aug. 20	7.7	20.09			19. 19	Aug. 6	6.5	15.19	Aug. 27	...	9.37
$\psi$ Sagittarii.			July 14	6.5	11.03	28	6.5	15.13	28	5.7	9.51
		19. 6	Aug. 19	...	10.87	B.A.C. 6727.			B.A.C. 6773.		
July 26	...	49.76	B.A.C. 6666.					19. 31			19. 39
29	6.0	50.09			19. 21			34.52	July 14	7.0	37.75
* N.P.D. 70° 49'.			Aug. 23	6.5?	5.13	Aug. 25	6.7	34.52	Aug. 23	7.0	37.51
			28	6.0	4.92	27	6.5	34.72	Sept. 13	7.0	37.52
Aug. 9	7.3	14.70	Sept. 1	6.7?	5.05	$\sigma$ Draconis.			$\delta$ Sagittæ.		
Sept. 1	7.3	14.52	$\alpha$ Vulpeculæ.					19. 32			19. 41
$d$ Sagittarii.					19. 22	Aug. 13	...	37.62	Aug. 9	...	3.39
		19. 9	Aug. 6	...	47.72	20	5.3	37.87	B.A.C. 6785.		
July 14	5.3	19.63	25	4.5	47.87	(R) Cygni.					
21	5.5	19.51	$\beta^2$ Cygni.					19. 33	Sept. 1	6.3	12.43
Aug. 3	5.5	19.62			19. 25	June 30	8.7	0.15	Radcliffe 4476.		
$\omega$ Aquilæ.			July 14	...	1.96	July 14	9.0	0.33			
		19. 11	26	...	1.93	29	9.0	0.56			19. 43
Aug. 5	5.7	9.12	$\iota^2$ Cygni.			Aug. 3	9.7	0.37	Aug. 7	7.7	23.19
6	5.7	9.07			19. 26	B.A.C. 6741.			$\alpha$ Aquilæ.		
13	...	9.13	Aug. 6	...	7.42			19. 34			19. 43
25	5.7	8.98	13	...	7.38	Aug. 6	6.7	0.11	July 13	...	51.16
Sept. 1	6.0	9.07	19	...	7.44	Radcliffe 4447.			30	...	51.32
$\delta$ Draconis.			$\mu$ Aquilæ.					19. 34	Aug. 9	...	51.09
		19. 12			19. 27	Feb. 4	8.3	46.30	27	...	51.35
July 29	...	30.73	Aug. 28	...	9.09	B.A.C. 6746.			Sept. 13	...	51.18
$f$ Aquilæ.			$h^2$ Sagittarii.					19. 35	R.H.C. 2990.		
		19. 12			19. 28	July 26	...	27.76			19. 45
July 14	5.7	58.00	Aug. 20	...	3.74				Aug. 5	8.0	9.22
			30	...	3.85				19	...	9.62

♌ Sagittarii.			B.A.C. 6878.			λ Ursæ Minoris.			* N.P.D. 106° 58'.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		19. 47			19. 55			20. 5			20. 14
July 30	6.0	8.44	Aug. 30	7.0	19.13	Feb. 20	...	44.86	Aug. 23	8.0	29.88
Aug. 23	...	8.25	B.A.C. 6889.			22	6.3	45.97	B.A.C. 7009.		
Sept. 1	5.3	8.36				24	6.5	45.76			20. 15
ξ Aquilæ.					19. 56	25	6.3	45.82	July 30	7.0	29.80
		19. 47	Aug. 25	7.5	36.24	29 Cygni.			Aug. 30	7.3	29.37
Aug. 27	...	21.96	27	...	36.39			20. 9	γ Cygni.		
Sept. 13	5.3	21.99	Sept. 18	7.5?	36.55	Sept. 1	5.0	13.16			20. 17
58 Aquilæ.			B.A.C. 6907.			68 Draconis.			Aug. 20	...	7.99
		19. 47			20. 0			20. 9	28	...	7.95
Aug. 9	6.0	27.99	Aug. 6	7.0	28.35	Feb. 9	...	14.70	Groombridge 3212.		
13	6.5	28.26	25	7.0	28.11	Aug. 30	6.0	15.29			20. 19
R.H.C. 3000.					28.33	4 Capricorni.			Mar. 5	7.0	36.87
		19. 49	B.A.C. 6911.					20. 9	6	7.0	37.20
Aug. 25	9.7	19.29	Aug. 30	7.0	45.22	Sept. 18	6.3	40.47	11	...	37.26
30	9.7	18.38	Sept. 1	7.0	45.59	α <sup>2</sup> Capricorni.			72 Draconis.		
Sept. 18	10.0	23.16	13	6.7	45.44			20. 10			20. 21
g Sagittarii.			B.A.C. 6923.			Aug. 7	...	10.43	Aug. 30	8.3	5.95
		19. 49			20. 2	Radcliffe 4721.			Sept. 15	...	5.86
Aug. 5	6.0	53.61	Aug. 20	7.3	11.65			20. 11	B.A.C. 7049.		
R.H.C. 3015.			Rümker 8047.			July 30	8.7	5.91			20. 21
		19. 53			20. 3	Aug. 6	8.7	5.74	Sept. 18	6.7	11.13
Mar. 9	9.5	9.91	Aug. 6	6.7	15.35	20	8.5	6.23	Oeltz. Arg. 20562.		
Sept. 1	9.7	11.58	Sept. 18	7.0	15.48	27	...	6.07			20. 22
13	9.0	9.33	ξ <sup>2</sup> Capricorni.			B.A.C. 6986.			Aug. 9	7.3	46.21
B.A.C. 6867.					20. 4			20. 11	B.A.C. 7069.		
		19. 53	Aug. 7	6.3	31.10	Sept. 13	6.0	52.09			20. 23
Aug. 23	5.3	13.03	30	6.0	30.91	B.A.C. 7006.			Aug. 23	8.0	54.62
25 Cygni.			Sept. 1	6.5	31.22			20. 14	B.A.C. 7070.		
		19. 54	B.A.C. 6941.			Sept. 1	7.0	29.67			20. 23
Aug. 6	5.5	42.64			20. 4	18	6.5	29.52	Aug. 23	8.5	56.60
19	...	42.81	Sept. 13	6.5	48.66						

B.A.C. 7083.			s Capricorni.			η Cephei.			B.A.C. 7300.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		20. 25			20. 33			20. 42			20. 54
Aug. 19	...	17.86	Aug. 30	9.0	36.44	Aug. 9	...	23.84	Aug. 20	7.7	57.23
30	6.0	17.82				20	...	23.84			
B.A.C. 7090.			B.A.C. 7157.			15 Delphini.			Radcliffe 5090.		
		20. 26			20. 33			20. 42			20. 56
Sept. 15	...	30.35	Aug. 20	6.5	58.37	Aug. 23	6.5	51.99	Mar. 26	8.3	2.88
						Sept. 18	6.5	51.74	Aug. 25	8.0	4.16
Radcliffe 4881.			α Cygni.			32 Vulpeculæ.			76 Capricorni.		
		20. 28			20. 36			20. 48			20. 56
Mar. 9	7.3	47.34	Sept. 15	...	35.64	Aug. 9	5.0	30.63	Sept. 13	6.3	19.47
17	7.5	47.40	74 Draconis.			25	...	30.48	6 Capricorni.		
22	7.7	47.87			20. 37	27	...	30.47			20. 57
23	7.7	47.40	Aug. 23	6.0	30.35	30	5.3	30.46	Sept. 15	...	57.64
24	7.5	47.23	ψ Capricorni.			Sept. 1	5.0	30.66	18	...	57.64
Aug. 28	7.5	48.00			20. 37	B.A.C. 7268.			22	...	57.87
26 Vulpeculæ.			Sept. 18	5.0	40.90			20. 51	B.A.C. 7334.		
Aug. 20	6.7	3.19	51 Cygni.			Aug. 19	...	2.06	Aug. 23	8.3	21.0
Radcliffe 4894.					20. 37	18 Delphini.					11.97
		20. 30	Aug. 20	6.0	49.98			20. 51	χ Capricorni.		
Mar. 9	6.5	32.53	Oeltz. Arg. 21012.			Aug. 20	6.0	35.52			21.0
22	7.0	32.82			20. 39	Sept. 13	6.0	35.36	Sept. 1	5.7	25.29
23	7.0	31.51	Aug. 19	...	11.52	1 Equulei (1st).			B. Z. 314. 125.		
Aug. 28	7.0	32.45	γ <sup>1</sup> Delphini.					20. 51			21. 1
κ Delphini.					20. 40	Aug. 23	5.3	58.79	Aug. 25	8.3	22.13
Aug. 19	...	13.81	Sept. 15	...	3.21	Sept. 1	5.5	58.82	27	...	22.26
W. B. xx. 821.			Radcliffe 4980.			1 Equulei (2d).			27 Capricorni.		
		20. 32			20. 40			20. 51			21. 1
Aug. 23	8.3	25.12	Mar. 8	8.3	16.15	Aug. 23	8.0	59.61	Sept. 18	7.0	25.40
24 Cephei (Hev.)			B.A.C. 7217.			Sept. 1	7.3	59.65	τ Cygni.		
		20. 32			20. 41	B.A.C. 7290.					21. 9
Sept. 1	8.5	28.40	Aug. 30	7.0	28.56			20. 53	Sept. 1	4.5	7.57
13	8.0	28.59	Sept. 1	...	28.78	Sept. 15	...	14.60	15	...	7.67
									18	4.7	7.43



W. B. xxi. 246.			B.A.C. 7468.			41 Capricorni.			16 Pegasi.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		21. 11			21. 22			21. 33			21. 46
Aug. 30	8.5	31.50	Aug. 23	6.3	4.55	Sept. 18	...	55.39	Aug. 28	...	36.23
Sept. 30	...	31.30	Sept. 24	6.7	3.98	24	...	55.16	Sept. 6	5.7	36.05
W. B. xxi. 249.			71 Cygni.			Oct. 8 5.5 55.20			W. B. xxi. 1125.		
		21. 11			21. 24	κ Capricorni.					21. 48
Aug. 30	7.7	38.41	Aug. 25	5.5	12.81			21. 34	Sept. 18	9.0	6.92
Sept. 30	7.3	38.47	30	5.3	12.70	Aug. 28	...	43.43	R.H.C. 3347.		
R.H.C. 3232.			β <sup>1</sup> Cephei.			Sept. 6	5.3	43.43			21. 52
		21. 12			21. 26	B.A.C. 7553.			Mar. 5	8.0	24.17
Mar. 8	8.7	13.10	Aug. 23	8.0	46.77			21. 35	6	8.3	24.11
Sept. 22	...	13.39	Sept. 30	8.0	46.83	Sept. 22	...	36.66	23	8.3	23.74
ι Capricorni.			B.A.C. 7494.			30	6.7	36.62	20 Pegasi.		
		21. 14			21. 26	Oct. 9	...	36.62			21. 54
Aug. 23	...	20.24	Sept. 1	7.0	56.71	B.A.C. 7562.			Sept. 6	...	10.34
Sept. 1	5.3	20.08	Oct. 8	7.0	56.61			21. 37	18	...	10.35
18	...	20.20	B.A.C. 7510.			Aug. 23	7.0	20.85	24	6.0	10.30
1 Pegasi (2d star).					21. 28	μ <sup>1</sup> Cygni.			B.A.C. 7676.		
		21. 15			21. 28			21. 37			21. 56
Sept. 24	...	31.11	Sept. 24	6.3	52.43	Oct. 8	5.3	47.69	Sept. 13	6.0	38.58
33 Capricorni.			ξ Aquarii.			μ <sup>2</sup> Cygni.			30	6.3	38.56
		21. 16			21. 30			21. 37	Oct. 8	6.3	38.62
Aug. 30	5.5	6.15	Sept. 1	5.0	11.25	Sept. 6	6.0	47.84	13	...	38.57
19 Aquarii.			5 Pegasi.			18	...	48.16	32 Aquarii.		
		21. 17			21. 31	B.A.C. 7584.					21. 57
Aug. 25	6.0	34.97	Sept. 6	...	6.81			21. 39	Aug. 30	6.0	29.21
Sept. 1	6.5	34.90	Oct. 8	6.0	6.79	Sept. 13	6.7	30.25	Sept. 6	...	29.25
Piazzi xxi. 127.			γ Capricorni.			11 Cephei.			18	...	29.24
		21. 20			21. 32			21. 39	α Aquarii.		
Aug. 25	8.5	6.78	Aug. 23	...	13.16	Sept. 24	...	49.47			21. 58
Sept. 30	9.0	7.18	Sept. 30	...	13.13	B.A.C. 7586.			Sept. 24	...	29.39
			Oct. 13	...	13.16			21. 39	Oct. 11	...	29.24
						Oct. 9	...	56.23	ι Pegasi.		
											22. 0
									Sept. 18	...	24.29
									Oct. 13	...	24.24

B.A.C. 7720.			γ Aquarii.			37 Pegasi.			η Aquarii.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
		22. 2			22. 14			22. 22			22. 28
Sept. 24	7.5	57.74	Sept. 24	...	19.27	Oct. 1	...	47.20	Oct. 1	...	3.49
Oct. 5	7.3	57.86	30	...	19.24				9	...	3.42
8	7.0	57.86	Oct. 1	...	19.15	σ Aquarii.			Piazzi xxii. 158.		
11	7.0	57.86	* N.P.D. 18° 58'.					22. 23			22. 28
B.A.C. 7736 (2d).					22. 14	Aug. 23	5.3	7.69			22. 28
		22. 3	Oct. 26	...	46.46	Groombridge 3820.			Oct. 30	7.3?	58.79
Sept. 22	...	49.59	* N.P.D. 19° 0'.						B.A.C. 7878.		
B.A.C. 7740.					22. 14	Mar. 14	...	0.98			22. 29
		22. 4	Oct. 26	...	51.11	29	5.7	1.46	Oct. 8	6.5	16.38
Sept. 13	7.5	42.21	49 Aquarii.			Apr. 1	...	0.60	8 Lacertæ.		
B.A.C. 7744.					22. 15	3	...	1.53			22. 29
		22. 5	Oct. 11	...	35.61	10	5.5	0.88	Oct. 13	...	33.64
Oct. 13	...	19.99	R.H.C. 3422.			Sept. 18	5.5	0.88	B.A.C. 7881.		
B.A.C. 7745.					22. 16	22	...	1.30			22. 29
		22. 5	Apr. 10	8.0	3.28	24	...	0.86	Oct. 11	6.0	46.54
Oct. 9	...	45.22	33 Pegasi.			30	5.0	0.89	κ Aquarii.		
11	...	45.26			22. 16	Oct. 5	...	1.14			22. 30
B.A.C. 7753.			Oct. 13	...	49.79	8	5.7	0.49	Sept. 24	...	24.10
		22. 6	50 Aquarii.			13	...	1.03	31 Cephei.		
Oct. 8	5.7	31.05			22. 16	58 Aquarii.					22. 32
B.A.C. 7760 (2d).			Aug. 23	6.3	50.60			22. 24	Sept. 30	5.5	15.73
		22. 7	Sept. 18	6.5	50.32	Oct. 11	...	9.35	Oct. 5	5.7	15.59
Oct. 26	6.0	23.90	22	...	50.32	Groombridge 3824.			ζ Pegasi.		
θ Aquarii.			Oct. 8	6.0	50.37			22. 24			22. 34
		22. 9	34 Pegasi.			Sept. 18	6.3	30.82	Oct. 1	...	22.82
Sept. 24	4.7	20.34			22. 19	30	6.7	30.65	B.A.C. 7950.		
Oct. 5	...	20.33	Aug. 23	5.7	23.65	α Lacertæ.					22. 40
11	...	20.27	Sept. 24	...	23.67	Oct. 26	...	26.84	Oct. 8	6.7	8.78
			35 Pegasi.			ν Aquarii.			Groombridge 3888.		
		22. 20			22. 20			22. 26			22. 41
		22. 20	Oct. 11	5.3	40.05	Aug. 23	5.0	55.40	Oct. 30	8.7?	11.22

♈ Aquarii.			♊ Piscium.			B.A.C. 8083.			65 Pegasi.			
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.	
		22. 42			22. 56			23. 6			23. 15	
Sept. 30	...	4. 41	Sept. 22	...	38. 97	Oct. 1	...	27. 82	Oct. 1	...	36. 32	
			Oct. 8	5. 0	38. 90		8	5. 7	27. 69	Nov. 10	...	36. 35
			9	...	39. 27							
R.H.C. 3493.			α Pegasi.			ψ <sup>1</sup> Aquarii.			B.A.C. 8156.			
		22. 45			22. 57			23. 8			23. 16	
Apr. 19	...	20. 98	Oct. 13	...	41. 33	Oct. 5	5. 5	26. 97	Oct. 9	...	48. 98	
			30	...	41. 28				30	...	49. 05	
15 Lacertæ.			3 Andromedæ.			B.A.C. 8104.			κ Piscium.			
		22. 45			22. 57			23. 9			23. 19	
Oct. 26	...	38. 18	Sept. 30	5. 3	48. 97	Oct. 1	...	35. 34	Oct. 8	5. 0	39. 19	
			Oct. 5	5. 7	49. 12	Nov. 9	7. 0	35. 22	Nov. 9	...	39. 09	
			11	...	49. 19							
51 Pegasi.			5 Andromedæ.			γ Piscium.			B.A.C. 8184.			
		22. 50			22. 57			23. 9			23. 22	
Sept. 27	...	29. 45	Sept. 30	5. 3	48. 97	Oct. 9	...	48. 31	Oct. 5	7. 3	11. 50	
30	5. 3	29. 44	Oct. 5	5. 7	49. 12				Nov. 9	7. 0	11. 52	
			11	...	49. 19							
R.H.C. 3509.			5 Andromedæ.			94 Aquarii (2d).			Radcliffe 6099.			
		22. 50			23. 1			23. 11			23. 24	
Mar. 23	7. 0	38. 95	Sept. 30	6. 5	18. 91	Sept. 24	6. 5	38. 58	Apr. 3	6. 7	11. 88	
Apr. 21	7. 5	38. 03	Oct. 1	...	18. 99				13	...	12. 28	
			8	6. 0	19. 04				19	...	10. 54	
			9	...	18. 93							
2 Piscium.			A Piscium.			B.A.C. 8122.			Groombridge 4101.			
		22. 52			23. 1			23. 12			23. 27	
Oct. 8	6. 3	10. 75	Sept. 22	...	24. 65	Oct. 8	7. 3	45. 32	Oct. 9	...	49. 74	
9	...	11. 14							11	5. 7	49. 48	
11	6. 0	10. 74							30	...	50. 72	
30	...	10. 62										
3 Piscium.			B.A.C. 8064.			ο Cephei.			Radcliffe 6129.			
		22. 53			23. 2			23. 12			23. 29	
Sept. 30	7. 0	20. 97	Nov. 9	6. 7?	3. 96	Oct. 11	4. 7	48. 85	Apr. 20	7. 5	46. 67	
Oct. 5	7. 0	20. 92										
R.H.C. 3519.			Oeltz. Arg. 25223.			B.A.C. 8126.			B.A.C. 8221.			
		22. 54			23. 3			23. 13			23. 30	
Apr. 19	...	3. 84	Oct. 5	8. 0	46. 74	Oct. 30	...	2. 29	Sept. 30	6. 0	17. 54	
			11	8. 5	46. 48				Oct. 5	6. 5	17. 76	
R.H.C. 3520.			6 Andromedæ.			B. Z. 324. 12.			Nov. 9	7. 0	17. 71	
		22. 54			23. 3			23. 14				
Apr. 3	6. 0	12. 81	Oct. 30	6. 5?	54. 01	Nov. 9	7. 7	45. 51				
Nov. 9	6. 5	11. 51										

74 Pegasi.			δ Sculptoris.			B.A.C. 8321.			B.A.C. 8338.		
	Mag.	h. m.		Mag.	h. m.		Mag.	h. m.		Mag.	h. m.
Nov. 10	...	23. 30	Oct. 30	...	23. 41	Oct. 30	...	23. 49	Oct. 8	7. 0	23. 53
11	...	28. 35	Nov. 11	...	31. 53	Nov. 9	7. 3	52. 67			30. 68
18	7. 0	28. 43			31. 23	18	6. 7	51. 76	30 Piscium.		
B.A.C. 8239.			21 Piscium.			B.A.C. 8333.					23. 54
		23. 33			23. 42			23. 52	Sept. 22	...	40. 78
Sept. 30	6. 5	47. 63	Nov. 10	...	11. 18	Oct. 5	7. 3	23. 43	Oct. 5	...	40. 65
Oeltz. Arg. 25960.			Groombridge 4154.			Groombridge 4193.			Nov. 18	4. 7	40. 61
		23. 36			23. 45			23. 52	33 Piscium.		
Nov. 9	8. 0	29. 97	Nov. 9	6. 7	31. 38	Apr. 15	...	56. 82			23. 58
78 Pegasi.			11	6. 5	31. 68	17	...	57. 38	Oct. 5	...	4. 01
		23. 36	18	6. 5	31. 69	Nov. 10	7. 5?	57. 96	Radcliffe 6314.		
Oct. 30	...	51. 34				11	7. 0	57. 74			23. 59
									Nov. 9	9. 0	47. 88



**RADCLIFFE OBSERVATORY,  
OXFORD.**

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**OBSERVATIONS  
WITH  
THE MERIDIAN CIRCLE;  
AND COMPUTATIONS  
OF  
GEOCENTRIC N.P.D.**

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**1858.**

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No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Jan. 1	30.31	36.6	43.1	12 Aurigæ.....	24 29 41.5	— 5.8	29 33.5	43 44 51.3	+13.5
2		30.31	35.9	42.8	11 Orionis .....	330 51 39.5	—100.8	49 57.1	97 24 27.7	+6.2
3		"	"	"	B.A.C. 1796 .....	357 10 6.3	—39.1	9 25.1	71 4 59.7	+7.6
4		30.31	33.0	41.8	B.A.C. 1874 .....	45 13 57.4	+16.6	14 11.6	23 0 13.2	+13.1
5		"	"	"	χ <sup>3</sup> Orionis.....	357 56 34.3	—38.1	55 54.6	70 18 30.2	+8.5
6		30.31	32.0	40.5	17 Geminorum ...	0 47 49.1	—34.1	47 13.7	67 27 11.1	+8.2
7	Jan. 2	...	...	...	Wire (Nad. Obs.) R.	210 0 2.0	.....	.....	.....	.....
8	Jan. 4	30.28	27.0	38.0	17 Arietis .....	358 47 46.1	—37.3	47 7.5	69 27 17.3	+10.6
9		30.27	26.8	36.7	κ Fornacis .....	313 50 44.2	—245.4	46 36.8	114 27 48.0	—3.7
10		"	"	"	27 Arietis .....	355 19 46.1	—42.6	19 1.2	72 55 23.6	+9.8
11		"	"	"	B.A.C. 784 .....	59 4 41.6	+34.3	5 13.6	9 9 11.2	+24.4
12		"	"	"	12 Persei .....	17 50 23.5	—13.3	50 8.1	50 24 16.7	+16.7
13		30.27	26.1	34.9	π Arietis .....	355 7 37.6	—42.9	6 53.3	73 7 31.5	+10.0
14		"	"	"	47 Arietis .....	358 21 5.3	—38.0	20 25.4	69 53 59.4	+11.1
15		"	"	"	α Ceti .....	341 47 30.3	—68.9	46 20.0	86 28 4.8	+6.1
16		"	"	"	κ Persei .....	22 33 49.7	—8.0	33 40.7	45 40 44.1	+17.8
17		30.26	26.1	33.7	B.A.C. 1001 .....	43 22 15.6	+14.7	22 28.8	24 51 56.0	+21.8
18		"	"	"	B.A.C. 1035 .....	26 56 54.8	—3.3	56 49.9	41 17 34.9	+18.6
19		"	"	"	Groom. 642 .....	64 25 25.0	+42.2	26 5.1	3 48 19.7	+23.6
20		30.26	25.4	33.0	10 Tauri..... R.	261 47 17.7	+78.3	48 34.5	90 2 59.3	+5.6
21		"	"	"	27 Tauri..... R.	238 7 53.2	+33.0	8 24.9	66 22 49.7	+12.1
22		"	"	"	λ Tauri..... R.	249 39 29.0	+51.1	40 17.7	77 54 42.5	+9.1
23		30.26	25.9	32.1	γ Tauri..... R.	246 27 50.1	+45.5	28 34.3	74 42 59.1	+9.8
24		"	"	"	θ <sup>3</sup> Tauri..... R.	246 11 32.2	+45.1	12 15.6	74 26 40.4	+9.8
25		"	"	"	Aldebaran..... R.	245 31 29.7	+44.0	32 12.0	73 46 36.8	+9.9
26		30.25	25.9	32.0	μ Eridani .....	265 15 10.1	+88.7	16 36.7	93 31 1.5	+5.8
27		"	"	"	ε Tauri .....	240 21 49.1	+36.1	22 23.6	68 36 48.4	+10.4
28		30.25	26.2	31.9	λ Eridani .....	329 19 59.1	—109.2	18 7.7	98 56 17.1	+5.2
29		"	"	"	12 Aurigæ.....	24 29 44.5	—5.9	29 36.3	43 44 48.5	+13.9
30		"	"	"	B.A.C. 1661 .....	341 41 27.5	—69.1	40 16.7	86 34 8.1	+7.2
31		"	"	"	18 Camelopardali	35 21 27.3	+5.8	21 31.4	32 52 53.4	+14.4

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5'$  = for Jan. 1, +  $1''$ .5, for Jan. 4, +  $1''$ .6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 1,  $30^{\circ} 0' 2''$ .1, for Jan. 4,  $30^{\circ} 0' 2''$ .2.

Jan. 1. Temperature of the instrument  $42^{\circ}$ 0. The stars ill defined.

Jan. 4. The stars ill defined and unsteady.

4. Nearest division. 4.5. Foggy. 6. Thick fog. 12, 21. Very unsteady. 15. Ill defined.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	" ' "	" ' "	o ' "	"
1	Jan. 4	30.25	25.6	31.4	$\nu$ Orionis .....	330 51 40.6	-102.9	49 56.0	97 24 28.8	+5.7
2	"	"	"	"	B.A.C. 1796 .....	357 10 6.2	-39.8	9 24.2	71 5 0.6	+7.5
3	"	"	"	"	B.A.C. 1829 .....	2 52 58.0	-31.6	52 25.1	65 21 59.7	+9.5
4	"	"	"	"	B.A.C. 1874 .....	45 13 56.3	+16.8	14 10.6	23 0 14.2	+13.3
5	"	"	"	"	38 Aurigæ .....	21 9 27.0	-9.6	9 15.0	47 5 9.8	+10.7
6	"	30.25	26.1	31.1	2 Geminorum ...	1 54 0.9	-32.9	53 25.5	66 20 59.3	+8.7
7	Jan. 9	30.10	39.5	44.1	$\epsilon$ Tauri .....	359 38 12.3	-34.9	37 35.6	68 36 49.2	+10.4
8	"	"	"	"	$\lambda$ Eridani .....	329 19 55.4	-105.7	18 6.7	98 56 18.1	+4.4
9	"	30.09	39.5	43.9	$\eta$ Tauri .....	0 11 55.4	-34.1	11 19.0	68 3 5.8	+10.1
10	"	"	"	"	B.A.C. 1713 .....	311 36 53.3	-282.8	32 8.2	116 42 16.6	+2.1
11	"	30.10	38.6	43.8	26 Aurigæ (2d)...	8 39 15.5	-23.3	38 48.9	59 35 35.9	+10.9
12	"	"	"	"	B.A.C. 1850 .....	10 19 44.8	-21.3	19 20.4	57 55 4.4	+10.6
13	"	"	"	"	59 Orionis (2d)...	340 4 51.7	-70.8	3 37.9	88 10 46.9	+6.2
14	"	30.10	38.5	43.1	$\nu$ Orionis .....	353 2 12.4	-44.9	1 25.3	75 12 59.5	+7.6
15	"	"	"	"	B.A.C. 2014 .....	13 26 26.3	-17.8	26 6.0	54 48 18.8	+9.6
16	"	30.10	38.9	43.0	$\beta$ Canis Majoris ..	320 23 50.1	-159.1	21 9.4	107 53 15.4	+4.4
17	"	...	...	...	Wire (Nad.Obs.) R.	210 0 3.0	.....	.....	.....	.....
18	Jan. 11	30.27	34.0	45.7	Radcliffe 756 .....	63 30 48.6	+40.1	31 25.9	4 42 58.9	+25.8
19	"	"	"	"	$\pi$ Arietis .....	355 7 37.2	-42.2	6 52.8	73 7 32.0	+9.8
20	"	"	"	"	Radcliffe 836 .....	62 40 0.1	+38.9	40 35.9	5 33 48.9	+25.6
21	"	30.28	34.0	43.0	B.A.C. 976 .....	358 28 12.7	-37.2	27 33.5	69 46 51.3	+11.1
22	"	"	"	"	60 Arietis .....	3 24 6.2	-30.4	23 32.9	64 50 52.4	+12.6
23	"	"	"	"	Groom. 642 .....	64 25 27.8	+41.6	26 6.5	3 48 18.3	+25.2
24	"	30.29	33.2	41.2	21 Eridani .....	332 11 3.7	-96.3	9 24.7	96 5 0.1	+3.3
25	"	"	"	"	32 Eridani (2d) R.	265 6 45.5	+87.1	8 10.1	93 22 34.9	+4.4
26	"	"	"	"	$\omega$ Tauri .....	R. 242 30 55.4	+38.8	31 31.4	70 45 56.2	+10.7
27	"	30.31	31.9	40.1	$\gamma$ Tauri .....	R. 246 27 50.3	+45.0	28 33.2	74 42 58.0	+9.6
28	"	"	"	"	$\theta$ Tauri .....	R. 246 11 33.3	+44.6	12 15.3	74 26 40.1	+9.6
29	"	"	"	"	4 Camelopardali ..	34 44 38.9	+5.1	44 40.8	33 29 44.0	+18.2
30	"	30.32	31.8	39.2	B.A.C. 1490 .....	14 38 50.1	-16.8	38 31.5	53 35 53.3	+14.0
31	"	30.32	32.4	39.0	$m$ Tauri .....	356 42 18.9	-40.0	41 36.6	71 32 48.2	+9.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Jan. 9, +1''8, for Jan. 11, +1''7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 9,  $30^{\circ} 0' 3''$ .0, for Jan. 11,  $30^{\circ} 0' 3''$ .1.

Jan. 9. Microscopes difficult to read on account of the excessive moisture. 4. Nearest division.  
16, 23, 29. Unsteady. 29. After this observation the stars were very unsteady and ill defined.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.



No. for Ref.	Day of Observation.	Baro- meter.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Jan. 11	30°32	32°4	39°0	$\mu$ Leporis .....	321 54 25°0	-15°06	51 51°1	106 22 33°7	+ 2°8
2		30°32	32°0	38°6	B.A.C. 1708 .....	326 15 10°4	-12°31	13 4°3	102 1 20°5	+ 3°8
3	"	"	"	"	22 Camelopardali .....	34 31 0°1	+ 4°8	31 2°1	33 43 22°7	+15°2
4	"	"	"	"	B.A.C. 1796 .....	357 10 6°8	-39°4	9 24°3	71 5 0°5	+ 7°5
5		30°33	31°7	38°0	B.A.C. 1829 .....	2 52 58°8	-31°3	52 25°4	65 21 59°4	+ 9°6
6	"	"	"	"	$\chi^1$ Orionis .....	358 29 59°9	-37°4	29 19°4	69 45 5°4	+ 8°7
7		30°34	31°4	37°9	1 Geminorum ...	1 31 9°4	-33°1	30 33°6	66 43 51°2	+ 8°8
8	"	"	"	"	71 Orionis .....	357 27 15°9	-39°0	26 34°6	70 47 50°2	+ 7°9
9	"	"	"	"	B.A.C. 2070 .....	349 31 48°5	-52°1	30 53°9	78 43 30°9	+ 6°6
10	"	"	"	"	10 Lyncis .....	39 49 46°8	+ 10°6	49 54°2	28 24 30°6	+11°2
11		30°34	31°4	37°3	12 Lyncis ... (2d)	37 49 14°7	+ 8°4	49 19°7	30 25 5°1	+10°3
12	"	"	"	"	59 Aurigæ .....	17 16 50°0	-14°0	16 33°5	50 57 51°3	+ 7°8
13		30°35	31°4	37°1	62 Aurigæ .....	16 29 22°1	-14°7	29 4°1	51 45 20°7	+ 7°3
14	Jan. 12	30°27	40°2	42°9	38 Arietis .....	350 6 9°2	-50°0	5 16°4	78 9 8°4	+ 8°0
15		30°27	41°0	43°0	7 Eridani .....	328 48 16°3	-108°2	46 25°9	99 27 58°9	+ 1°2
16	"	"	"	"	B.A.C. 976 .....	358 28 9°7	-36°7	27 30°8	69 46 54°0	+11°0
17		30°27	40°0	43°0	12 Eridani .....	308 47 36°6	-37°4	41 23°8	119 33 1°0	-4°0
18	"	"	"	"	Lalande 6247 ...	354 28 4°8	-42°7	27 19°9	73 47 4°9	+ 9°9
19		30°25	40°0	43°0	B.A.C. 1335 .....	351 46 38°9	-47°1	45 49°1	76 28 35°7	+ 9°1
20	"	"	"	"	B.A.C. 1379 .....	58 29 30°7	+ 32°5	29 59°8	9 44 25°0	+22°5
21		30°24	39°9	42°7	4 Camelopardali .	34 44 38°6	+ 5°0	44 40°3	33 29 44°5	+18°4
22	"	"	"	"	$\pi^4$ Orionis .....	348 10 47°1	-53°4	9 50°8	80 4 34°0	+ 8°0
23		30°23	40°4	42°9	13 Orionis .....	347 33 9°8	-54°6	32 13°0	80 42 11°8	+ 7°7
24		30°22	40°6	42°9	v Orionis .....	330 51 34°8	-99°6	49 52°5	97 24 32°3	+ 4°5
25	Jan. 13	30°17	33°5	43°6	Radcliffe 827 .....	62 31 29°1	+ 38°5	32 4°7	5 42 20°1	+25°9
26	"	"	"	"	B.A.C. 955 .....	52 5 17°3	+ 24°6	5 38°7	16 8 46°1	+24°6
27		30°17	32°3	42°2	B.A.C. 979 .....	55 26 43°9	+ 28°9	27 10°0	12 47 14°8	+25°0
28	"	"	"	"	14 Eridani .....	328 35 21°9	-110°9	33 27°8	99 40 57°0	+ 1°6
29	"	"	"	"	Lalande 6247 ...	354 28 8°6	-43°3	27 22°9	73 47 1°9	+ 9°8
30		30°17	31°4	41°0	6 Tauri .....	347 8 58°9	-56°3	7 59°0	81 6 25°8	+ 7°6
31	"	"	"	"	22 Eridani .....	332 35 43°8	-94°7	34 6°0	95 40 18°8	+ 3°3

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for Jan. 12, +  $1''$ .6, for Jan. 13, +  $1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 12,  $30^\circ 0' 3''$ .2, for Jan. 13,  $30^\circ 0' 3''$ .3.

1—13. Very unsteady.

18, 21—24. Cloudy. 24. Very unsteady. 30. Nearest division.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected.*	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Jan. 13	30°17	31°4	41°0	28 Tauri .....	1 57 10.8	-32.4	56 35.8	66 17 49.0	+12.1
2		30°17	31°4	40°1	B.A.C. 1222 .....	310 14 20.0	-325.6	8 50.9	118 5 33.9	-2.2
3	"	"	"	"	δ <sup>3</sup> Tauri .....	244 38 4.5	+41.9	38 44.0	72 53 8.8	+10.0
4		30°17	32°0	40°0	Aldebaran .....	245 31 32.4	+43.3	32 12.9	73 46 37.7	+9.7
5	"	"	"	"	μ Eridani .....	265 15 12.8	+87.3	16 36.9	93 31 1.7	+4.8
6	"	"	"	"	(R) Leporis .....	323 15 24.5	-140.4	13 0.9	105 1 23.9	+2.5
7		30°17	31°4	39°6	μ Leporis .....	321 54 23.3	-150.0	51 49.8	106 22 35.0	+2.5
8	"	"	"	"	Radcliffe 1474 ...	65 32 6.2	+43.4	32 46.9	2 41 37.9	+19.0
9		30°18	30°8	38°7	B.A.C. 1874 .....	45 13 59.2	+16.6	14 12.2	23° 0 12.6	+15.5
10	"	"	"	"	36 Camelopardali	43 58 47.3	+15.2	59 0.3	24 15 24.5	+14.3
11	"	"	"	"	3 Lyncis .....	40 3 35.4	+10.8	3 44.0	28 10 40.8	+13.1
12	"	"	"	"	6 Lyncis .....	36 30 12.2	+6.9	30 15.9	31 44 8.9	+11.9
13		30°18	30°4	38°0	41 Camelopardali	40 16 46.0	+11.1	16 54.3	27 57 30.5	+11.5
14	Jan. 14	30°21	33°1	41°3	51 Arietis .....	4 18 18.8	-29.2	17 47.2	63 56 37.6	+12.8
15	"	"	"	"	14 Eridani .....	328 35 21.9	-110.8	33 27.8	99 40 57.0	+1.5
16		30°20	33°6	40°6	B.A.C. 1055 .....	359 47 16.6	-35.3	46 38.6	68 27 46.2	+11.5
17	"	"	"	"	B.A.C. 1110 .....	338 23 5.0	-76.3	21 46.2	89 52 38.6	+4.9
18	"	"	"	"	14 Tauri .....	357 28 1.9	-38.6	27 20.8	70 47 4.0	+10.8
19		30°20	33°2	39°9	32 Eridani (1st) ...	334 53 23.6	-86.7	51 54.5	93 22 30.3	+4.1
20	"	"	"	"	* R.A. 3 <sup>h</sup> 58 <sup>m</sup> 0 <sup>s</sup> ...	357 44 26.8	-38.2	43 45.0	70 30 39.8	+10.8
21	"	"	"	"	55 Tauri .....	354 25 55.1	-43.3	25 8.7	73 49 16.1	+9.8
22		30°20	33°1	39°0	76 Tauri .....	352 40 39.3	-46.2	39 49.9	75 34 34.9	+9.2
23	"	"	"	"	90 Tauri .....	350 28 46.7	-50.0	27 52.9	77 46 31.9	+8.6
24		30°20	33°2	38°8	π <sup>4</sup> Orionis .....	348 10 47.0	-54.2	9 49.6	80 4 35.2	+7.9
25	Jan. 16	...	...	...	Wire (Nad. Obs.) R.	210 0 3.6	.....	.....	.....	.....
26	Jan. 18	30°27	38°4	41°3	B.A.C. 1127 .....	44 59 37.3	+16.1	59 50.2	23 14 34.6	+23.5
27	"	"	"	"	32 Eridani (2d) ...	334 53 15.8	-85.9	51 47.7	93 22 37.1	+3.8
28		30°28	38°9	41°3	ν Tauri .....	343 51 7.9	-62.4	50 2.7	84 24 22.1	+6.5
29	"	"	"	"	B.A.C. 1286 .....	39 43 54.0	+10.3	44 2.3	28 30 22.5	+21.6
30	"	"	"	"	B.A.C. 1347 .....	2 19 24.0	-31.5	18 49.2	65 55 35.6	+11.9

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on 5' = for Jan. 14, +1''.5, for Jan. 18, +1''.4.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 14,  $30^{\circ} 0' 3''.4$ , for Jan. 18,  $30^{\circ} 0' 3''.1$ .

2. Hardly visible.

3. Very unsteady.

9. Nearest division.

10. Very unsteady.

23. Nearest division.

24. Hazy; a thick fog.

26—28. Very hazy.

30. Thick clouds

over the whole sky.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1856, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Jan. 18	30.27	38.5	41.1	m Tauri.....	356 42 17.9	-39.4	41 36.0	71 32 48.8	+9.6
2		30.27	38.0	41.1	B.A.C. 1670 .....	313 23 43.1	-247.6	19 33.4	114 54 51.4	+0.3
3		"	"	"	22 Camelopardali .....	34 31 2.5	+4.8	31 4.5	33 43 20.3	+16.4
4		"	"	"	B.A.C. 1808 .....	353 15 11.3	-44.9	14 23.4	75 0 1.4	+8.0
5		30.26	36.9	40.9	66 Orionis .....	342 25 27.5	-65.9	24 18.6	85 50 6.2	+5.5
6		"	"	"	72 Orionis .....	354 26 14.8	-43.1	25 28.9	73 48 55.9	+7.2
7		"	"	"	Lalande 12274 ...	349 27 32.0	-51.5	26 38.1	78 47 46.7	+6.2
8		30.26	36.4	40.3	51 Aurigæ.....	17 45 32.5	-13.1	45 16.5	50 29 8.3	+9.6
9		"	"	"	56 Aurigæ ... (2d)	21 58 24.8	-8.5	58 14.2	46 16 10.6	+9.6
10	Jan. 19	30.09	40.8	42.0	12 Eridani.....	308 47 32.4	-367.7	41 22.5	119 33 2.3	-4.7
11		30.08	41.3	42.1	64 Arietis .....	2 28 13.7	-30.9	27 40.8	65 46 44.0	+12.3
12		30.08	42.5	42.5	6 Tauri .....	347 8 55.3	-54.8	7 58.7	81 6 26.1	+7.3
13		30.07	42.9	43.2	ω <sup>1</sup> Tauri .....	358 28 45.6	-36.2	28 7.6	69 46 17.2	+10.9
14		30.06	43.1	43.8	B.A.C. 1391 .....	354 8 10.5	-42.7	7 25.8	74 6 59.0	+8.5
15	Jan. 20	29.87	36.8	41.9	6 Lyncis .....	36 30 13.9	+6.8	30 18.2	31 44 6.6	+13.3
16		"	"	"	51 Aurigæ.....	17 45 31.0	-12.9	45 15.7	50 29 9.1	+9.8
17		"	"	"	* R.A. 6 <sup>h</sup> 40 <sup>m</sup> 20 <sup>s</sup>	18 21 22.6	-12.3	21 8.1	49 53 16.7	+7.5
18		29.89	36.6	41.4	62 Aurigæ.....	16 29 25.6	-14.3	29 8.5	51 45 16.3	+8.2
19	Jan. 21	30.26	33.3	39.0	0 <sup>3</sup> Eridani .....	330 23 36.2	-103.1	21 51.8	97 52 33.0	+2.5
20		"	"	"	83 Tauri .....	351 40 7.9	-48.0	39 17.5	76 35 7.3	+8.7
21		"	"	"	89 Tauri .....	353 59 62.5	-44.1	59 16.0	74 15 8.8	+9.3
22		30.25	32.5	38.4	58 Eridani.....	321 5 12.3	-156.4	2 33.6	107 11 51.2	+0.6
23		"	"	"	B.A.C. 1522 .....	44 51 32.3	+16.1	51 46.5	23 22 38.3	+21.0
24		"	"	"	Radcliffe 1377 ...	63 45 59.7	+40.7	46 38.3	4 27 46.5	+23.0
25		30.26	32.1	37.5	109 Tauri .....	0 11 56.4	-34.8	11 19.8	68 3 5.0	+10.2
26		"	"	"	29 Orionis.....	330 19 42.1	-103.7	17 55.9	97 56 28.9	+3.1
27		"	"	"	α Leporis .....	320 21 34.0	-162.8	18 49.3	107 55 35.5	+1.2
28		30.26	31.9	36.9	0 Aurigæ .....	28 0 16.1	-2.1	0 11.7	40 14 13.1	+15.2
29		"	"	"	B.A.C. 1850 .....	10 19 45.7	-21.8	19 21.4	57 55 3.4	+11.3
30		"	"	"	45 Aurigæ.....	31 45 18.2	+1.9	45 17.8	36 29 7.0	+13.4

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on  $5' =$  for Jan. 19,  $+1''.4$ , for Jan. 20,  $+1''.5$ , for Jan. 21,  $+1''.5$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 19,  $30^{\circ} 0' 2''.9$ , for Jan. 20,  $30^{\circ} 0' 2''.6$ , for Jan. 21,  $30^{\circ} 0' 2''.4$ .

8. Ill defined.

9. Extremely faint.

13. Thick clouds over the whole sky.

19—21. Cloudy.

30. Unsteady and ill defined.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Jan. 21	30.26	31.9	36.9	B.A.C. 2076 .....	12 49 26.2	-18.9	49 4.7	55 25 20.1	+9.8
2		30.27	31.2	35.9	B.A.C. 2217 .....	317 39 58.3	-189.4	36 46.5	110 37 38.3	+1.8
3		30.27	31.0	35.2	R.H.C. 1012 .....	62 45 26.9	+39.2	46 3.8	5 28 21.0	+12.8
4	Jan. 23	30.43	28.5	38.3	14 Tauri .....	357 28 3.0	-39.3	27 22.7	70 47 2.1	+10.6
5	"	"	"	"	32 Eridani (1st) ..	334 53 24.8	-88.4	51 55.5	93 22 29.3	+3.3
6	"	"	"	"	ν Tauri .....	343 51 11.7	-64.3	50 5.8	84 24 19.0	+6.2
7		30.43	26.5	36.5	ω <sup>1</sup> Tauri .....	357 29 7.2	-39.5	28 25.4	70 45 59.4	+10.6
8	"	"	"	"	48 Tauri .....	353 17 52.1	-46.2	17 4.8	74 57 20.0	+9.2
9	"	"	"	"	60 Tauri .....	351 59 40.7	-48.4	58 50.2	76 15 34.6	+8.8
10		30.43	25.9	35.2	Piazzi iv. 96 .....	14 41 4.2	-17.0	40 45.5	53 33 39.3	+17.6
11	"	"	"	"	B.A.C. 1428 .....	53 54 46.4	+27.5	55 11.8	14 19 13.0	+23.8
12		30.43	26.1	34.9	B.A.C. 1450 .....	313 32 48.5	-252.5	28 34.9	114 45 49.9	-1.6
13	"	"	"	"	B.A.C. 1490 .....	14 38 51.4	-17.0	38 33.6	53 35 51.2	+14.8
14	"	"	"	"	B.A.C. 1522 .....	44 51 32.8	+16.4	51 47.7	23 22 37.1	+21.4
15		30.43	25.9	34.0	Radcliffe 1377 ...	63 45 55.5	+41.4	46 35.2	4 27 49.6	+23.5
16	"	"	"	"	B.A.C. 1610 .....	56 23 47.7	+30.8	24 17.7	11 50 7.1	+22.2
17	"	"	"	"	111 Tauri .....	355 30 11.3	-42.5	29 26.9	72 44 57.9	+8.9
18	"	"	"	"	δ Orionis .....	337 51 21.6	-79.4	50 0.6	90 24 24.2	+4.5
19	"	"	"	"	θ <sup>3</sup> Orionis (1st) ..	332 45 18.7	-95.8	43 41.0	95 30 43.8	+3.4
20	"	"	"	"	B.A.C. 1829 .....	2 52 59.8	-31.6	52 27.2	65 21 57.6	+9.9
21		30.43	28.6	33.9	θ Aurigæ .....	15 26 48.2	-16.0	26 30.8	52 47 54.0	+12.1
22		...	...	...	Wire (Nad. Obs.) R.	210 0 2.0	.....	.....	.....	.....
23	Jan. 25	30.14	34.4	37.9	58 Tauri .....	353 0 25.9	-45.4	59 38.6	75 14 46.2	+9.0
24	"	"	"	"	Piazzi iv. 96 .....	14 41 2.7	-16.5	40 44.6	53 33 40.2	+17.6
25	"	"	"	"	89 Tauri .....	354 0 2.2	-43.8	59 16.4	74 15 8.4	+9.2
26		30.13	34.8	37.9	τ <sup>3</sup> Tauri .....	0 56 2.2	-33.5	55 27.1	67 18 57.7	+11.2
27	"	"	"	"	B.A.C. 1490 .....	14 38 51.6	-16.5	38 34.4	53 35 50.4	+14.9
28	"	"	"	"	64 Eridani .....	325 31 32.7	-125.6	29 25.6	102 44 59.2	+1.3
29	"	"	"	"	ε Leporis .....	315 44 3.4	-211.1	40 30.0	112 33 54.8	-0.7
30		30.13	34.1	37.7	γ S. L. ....	5 35 4.4	-27.4	15 37.1	61 58 47.7	
31	"	"	"	"	111 Tauri .....	355 30 8.7	-41.5	29 25.2	72 44 59.6	+8.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on  $5'$  = for Jan. 23, +  $1''.6$ , for Jan. 25, +  $1''.7$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 23,  $30^{\circ} 0' 2''.0$ , for Jan. 25,  $30^{\circ} 0' 2''.0$ .

Jan. 25. Very hazy during the whole night.

29. Very unsteady.

30. Semi-diameter, +  $16' 24''.9$ ; Parallax, +  $24' 37''.2$ . Both limbs slightly defective.\*

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Jan. 25	30°13	34.1	37.7	22 Camelopardali	34 31 2.7	+ 4.8	31 5.9	33 43 18.9	+17.6
2		30°12	33.7	37.4	128 Tauri .....	354 16 30.3	- 43.4	15 45.4	73 58 39.4	+ 8.0
3		"	"	"	136 Tauri .....	5 49 32.6	- 27.1	49 3.3	62 25 21.5	+10.4
4		"	"	"	139 Tauri .....	4 11 2.4	- 29.2	10 31.6	64 3 53.2	+ 9.8
5		30°12	33.4	37.1	Lalande 12274 ...	349 27 29.9	- 51.6	26 37.1	78 47 47.7	+ 5.8
6		"	"	"	51 Aurigæ .....	17 45 32.5	- 13.1	45 17.6	50 29 7.2	+10.4
7		30°12	33.9	37.0	ζ Geminorum ...	359 1 37.1	- 36.2	0 59.5	69 13 25.3	+ 5.8
8	Jan. 26	29°84	30.5	35.1	B.A.C. 1522 .....	44 51 33.8	+ 16.0	51 48.2	23 22 36.6	+21.9
9		"	"	"	B.A.C. 1549 .....	51 59 42.7	+ 12.8	59 53.3	16 14 31.5	+22.8
10		29°83	30.9	34.9	16 Aurigæ .....	11 28 7.4	- 20.2	27 46.2	56 46 38.6	+13.2
11		29°83	31.9	34.8	δ Orionis .....	337 51 19.1	- 77.1	50 0.3	90 24 24.5	+ 4.2
12		"	"	"	128 Tauri .....	354 16 29.5	- 43.2	15 44.7	73 58 40.1	+ 8.0
13		29°83	31.6	33.5	136 Tauri .....	5 49 32.0	- 27.0	49 2.7	62 25 22.1	+10.4
14		29°82	31.9	34.4	γ N. L. ....	6 31 35.0	- 26.0	38 26.6	61 35 58.2	
15		29°82	32.0	34.5	12 Lyncis (2d) ...	37 49 16.1	+ 8.2	49 22.0	30 25 2.8	+13.4
16		"	"	"	60 Aurigæ .....	16 51 27.5	- 14.0	51 11.9	51 23 12.9	+ 9.3
17		29°83	32.0	34.7	39 Geminorum ...	4 30 50.4	- 28.6	30 20.0	63 44 4.8	+ 6.9
18		"	"	"	τ Geminorum ...	8 43 22.1	- 23.4	42 57.7	59 31 27.1	+ 6.8
19		29°82	32.3	34.8	δ Geminorum ...	0 29 28.8	- 33.9	28 52.6	67 45 32.2	+ 5.1
20	Jan. 27	29°98	32.6	37.8	28 Tauri .....	1 57 8.2	- 32.1	56 34.7	66 17 50.1	+12.0
21		"	"	"	B.A.C. 1247 .....	61 41 7.6	+ 37.1	41 43.0	6 32 41.8	+26.8
22		"	"	"	* R.A. 4 <sup>h</sup> 6 <sup>m</sup> 30 <sup>s</sup> .	24 39 59.5	- 5.6	39 51.8	43 34 33.0	+18.7
23		29°98	33.0	37.5	58 Tauri .....	353 0 25.3	- 45.3	59 38.0	75 14 46.8	+ 9.0
24		"	"	"	B.A.C. 1417 .....	357 50 21.2	- 37.9	49 41.3	70 24 43.5	+10.4
25		29°98	32.4	37.1	B.A.C. 1471 .....	310 29 4.2	-315.6	23 46.2	117 50 38.6	- 2.7
26		"	"	"	62 Eridani .....	332 52 4.3	- 93.0	50 29.9	95 23 54.9	+ 2.9
27		29°98	32.4	37.1	11 Orionis .....	353 27 26.6	- 44.6	26 40.7	74 47 44.1	+ 8.6
28		29°98	34.0	36.9	B.A.C. 2070 .....	349 31 46.5	- 51.2	30 53.8	78 43 31.0	+ 5.7
29		29°98	33.5	36.8	τ Geminorum ...	8 43 22.3	- 23.4	42 57.9	59 31 26.9	+ 6.9
30		"	"	"	δ Geminorum ...	0 29 29.6	- 34.1	28 53.2	67 45 31.6	+ 5.2
31		29°99	32.6	36.8	γ N. L. ....	4 41 17.5	- 28.5	49 50.6	63 24 34.2	

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5'$  = for Jan. 26, +  $1''$ .7, for Jan. 27, +  $1''$ .7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 26,  $30^{\circ} 0' 2''$ .1, for Jan. 27,  $30^{\circ} 0' 2''$ .1.

4—7, 10—19. Cloudy. 14. Undulating; Semi-diameter,  $-16' 26''$ .5; Parallax, +  $23' 45''$ .7.  
 15. Companion scarcely visible. 25. Very faint. 26—31. Cloudy.  
 31. Semi-diameter,  $-16' 24''$ .5; Parallax, +  $25' 27''$ .8.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.  
 To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Jan. 27	29.99	32.6	36.8	Pollux .....	6 36 52.8	-26.0	36 25.3	61 37 59.5	+4.2
2	Jan. 28	30.09	35.8	40.0	7 <sup>h</sup> Eridani .....	313 53 3.8	-238.5	49 4.3	114 25 20.5	-3.0
3		30.09	35.1	39.9	57 Tauri .....	351 56 42.5	-47.0	55 54.0	76 18 30.8	+8.6
4		"	"	"	76 Tauri .....	352 40 38.2	-45.8	39 50.5	75 34 34.3	+8.8
5		30.09	35.4	39.4	ε Aurigæ .....	21 51 22.1	-8.6	51 11.9	46 23 12.9	+16.7
6		30.09	34.0	38.9	ν Orionis .....	330 51 32.8	-100.6	49 50.7	97 24 34.1	+2.4
7		"	"	"	B.A.C. 1796 .....	357 10 1.9	-38.9	9 20.9	71 5 3.9	+7.6
8		30.09	33.0	38.4	κ Orionis .....	328 32 52.8	-110.6	31 1.1	99 43 23.7	+1.9
9		"	"	"	β Aurigæ .....	23 10 28.7	-7.2	10 19.6	45 4 5.2	+14.3
10		30.10	33.6	38.2	2 Geminorum ...	1 53 59.9	-32.2	53 25.2	66 20 59.6	+9.0
11		30.10	34.9	38.1	B.A.C. 2070 .....	349 31 46.4	-51.3	30 53.6	78 43 31.2	+5.7
12		30.10	38.8	39.1	B.A.C. 2673 .....	340 58 53.8	-68.6	57 42.7	87 16 42.1	+1.3
13		30.10	39.5	40.0	β Cancræ .....	347 52 34.0	-53.9	51 38.9	80 22 45.9	+1.0
14		30.11	39.7	40.8	γ N. L. ....	0 53 56.8	-33.2	5 51.7	67° 8 33.1	
15		"	"	"	60 Cancræ .....	350 25 13.6	-49.3	24 22.3	77 50 2.5	-0.9
16		30.11	38.8	41.0	ν Cancræ .....	3 15 26.5	-30.1	14 54.5	64 59 30.3	-1.4
17	Feb. 1	29.79	29.3	38.9	90 Tauri .....	350 28 45.2	-49.7	27 54.7	77 46 30.1	+7.9
18		"	"	"	B.A.C. 1496 .....	52 16 51.6	+24.7	17 14.7	15 57 10.1	+24.4
19		"	"	"	(R) Leporis .....	323 15 23.9	-139.6	13 2.2	105 1 22.6	-0.1
20		29.79	28.1	36.0	16 Orionis .....	347 54 4.5	-54.5	53 7.3	80 21 17.5	+6.8
21		"	"	"	τ Orionis .....	331 16 3.9	-99.2	14 22.8	97 0 2.0	+2.1
22		"	"	"	B.A.C. 1696 .....	341 4 10.7	-69.2	2 58.9	87 11 25.9	+4.6
23		29.79	28.1	34.6	26 Aurigæ ... (2d)	8 39 15.8	-23.6	38 49.6	59 35 35.2	+12.0
24		"	"	"	B.A.C. 1850 .....	10 19 45.1	-21.6	19 21.1	57 55 3.7	+11.9
25		29.78	27.5	33.9	η Geminorum ...	0 47 49.4	-33.8	47 14.4	67 27 10.4	+8.5
26		29.78	27.0	33.5	9 Lyncis .....	34 44 7.7	+5.0	44 10.1	33 30 14.7	+14.8
27		...	...	...	Wire(Nad.Obs.)R.	210 0 2.3	.....	.....	.....	.....
28	Feb. 4	29.56	41.1	42.9	B.A.C. 1510 .....	52 5 22.3	+23.7	5 43.8	16 8 41.0	+24.7
29		"	"	"	Radcliffe 1377 ...	63 46 0.5	+39.0	46 37.6	4 27 47.2	+26.1
30		29.57	40.6	43.0	B.A.C. 1615 .....	307 56 57.1	-396.9	50 18.6	120 24 6.2	-3.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Jan. 28, +1''8, for Feb. 1, +2''0, for Feb. 4, +1''8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Jan. 28,  $30^{\circ} 0' 2''$ .1, for Feb. 1,  $30^{\circ} 0' 2''$ .3, for Feb. 4,  $30^{\circ} 0' 2''$ .3.

4, 5. Cloudy. 6, 8. Unsteady. 9-16. Cloudy. 10, 12, 14. Nearest division.

13. Scarcely visible. 14. Semi-diameter, -16' 18'' 3; Parallax, +28' 48'' 9.

17. Unsteady. 19. Dull red.

Feb. 4. Microscopes damp. 30. Faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	o	o	o	o
1	Feb. 4	29.57	40.6	43.0	B.A.C. 1678 .....	337 15 34.8	-76.7	14 16.0	91 0 8.8	+3.4
2		29.59	40.3	43.0	$\theta^1$ Orionis (1st)...	332 46 56.5	-90.6	45 24.3	95 29 0.5	+2.1
3		29.60	40.4	42.9	B.A.C. 1865 .....	307 41 18.7	-409.8	34 27.1	120 39 57.7	-3.2
4		"	"	"	1 Geminorum ...	1 31 7.0	-31.8	30 33.3	66 43 51.5	+9.2
5		"	"	"	42 Aurigæ.....	24 42 43.5	-5.4	42 36.8	43 31 48.0	+14.3
6		29.61	39.5	42.8	9 Lyncis .....	34 44 9.6	+4.9	44 11.9	33 30 12.9	+15.3
7		29.62	39.6	42.3	B.A.C. 2266 .....	309 58 51.5	-321.8	53 27.0	118 20 57.8	-2.0
8		29.63	39.6	42.3	(R) Geminorum..	1 10 12.9	-32.3	9 38.4	67 4 46.4	+6.1
9		29.64	39.0	42.1	B.A.C. 2420 .....	307 48 34.3	-405.7	41 47.6	120 32 37.2	-1.9
10		29.64	38.7	42.1	Radcliffe 1979 ...	64 59 58.6	+41.1	0 37.4	3 13 47.4	+13.5
11		"	"	"	Lalande 15277 ...	313 41 43.8	-236.9	37 45.2	114 36 39.6	-1.3
12		29.65	38.0	41.9	6 Cancræ.....	6 26 17.0	-25.7	25 49.5	61 48 35.3	+3.4
13	Feb. 6	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 2.3	.....	.....	.....	.....
14	Feb. 8	29.89	30.4	38.0	16 Aurigæ .....	11 28 9.1	-20.2	27 47.5	56 46 37.3	+13.8
15		"	"	"	111 Tauri .....	355 30 10.4	-41.5	29 26.6	72 44 58.2	+8.6
16		"	"	"	B.A.C. 1706 .....	53 10 50.6	+25.9	11 14.4	15 3 10.4	+23.9
17		29.90	30.0	37.1	$\theta^1$ Orionis (1st)...	332 46 59.5	-93.5	45 24.2	95 29 0.6	+1.8
18		"	"	"	6 Aurigæ .....	28 0 17.6	-2.1	0 13.2	40 14 11.6	+17.5
19		"	"	"	B.A.C. 1850 .....	10 19 45.9	-21.6	19 21.8	57 55 3.0	+12.2
20		29.90	29.9	36.9	$\beta$ Aurigæ .....	23 10 31.3	-7.2	10 21.9	45 4 2.9	+15.4
21		"	"	"	$\chi^3$ Orionis .....	357 56 34.4	-37.8	55 54.7	70 18 30.1	+8.2
22		"	"	"	41 Aurigæ (1st)...	26 59 0.3	-3.2	58 54.4	41 15 30.4	+15.8
23		"	"	"	2 Lyncis.....	37 17 58.9	+7.7	18 5.2	30 56 19.6	+17.8
24		29.89	29.7	36.1	B.A.C. 2072 .....	307 29 16.0	-434.1	21 59.3	120 52 25.5	-3.4
25		"	"	"	10 Lyncis .....	39 49 52.0	+10.5	50 0.1	28 24 24.7	+17.0
26		"	"	"	12 Lyncis (1st)...	37 49 28.8	+8.3	49 34.5	30 24 50.3	+15.9
27		"	"	"	17 Monocerotis...	346 26 39.1	-57.4	25 39.8	81 48 45.0	+3.8
28		29.89	29.6	35.9	B.A.C. 2266 .....	309 59 4.1	-331.9	53 29.5	118 20 55.3	-2.8
29		"	"	"	$\gamma$ Canis Majoris...	322 51 13.2	-142.6	48 48.6	105 25 36.2	-1.0
30		29.89	29.4	35.6	$\delta$ Canis Majoris...	312 8 44.8	-274.5	4 9.1	116 10 15.7	-2.4
31		"	"	"	$\lambda$ Geminorum ...	355 2 47.0	-42.2	2 3.3	73 12 21.5	+4.4

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for Feb. 8, +  $1''$ .6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Feb. 8,  $30^\circ 0' 2''$ .4.

7. Nearest division.      8. Intense yellow.      9. Faint.      24. Bearing no illumination.  
27. Very unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	"	° ' "	"
1	Feb. 8	29.89	29.4	35.6	♄ Geminorum.....	6 19 37.1	-26.5	19 8.1	61 55 16.7	+6.2
2		29.90	29.1	35.2	♄ Lyncis .....	35 38 36.7	+6.0	38 41.5	32 35 43.3	+10.6
3	"	"	"	"	R.H.C. 1123 .....	64 19 32.7	+41.3	20 11.5	3 54 13.3	+13.7
4		29.89	29.2	35.1	B.A.C. 2651 .....	308 26 24.5	-389.3	19 53.3	119 54 31.5	-2.5
5		29.90	29.0	35.0	♄ Argus .....	314 24 25.2	-231.7	20 30.9	113 53 53.9	-2.0
6	Feb. 9	29.93	31.6	38.8	♄ Orionis .....	336 14 35.5	-82.1	13 10.9	92 1 13.9	+2.6
7		29.93	32.0	38.1	♄ Orionis .....	328 32 54.2	-110.3	31 2.4	99 43 22.4	+0.5
8	"	"	"	"	♄ Aurigæ .....	23 10 31.5	-7.2	10 22.1	45 4 2.7	+15.5
9	"	"	"	"	♄ Orionis .....	353 2 13.7	-45.3	1 26.7	75 12 58.1	+6.7
10		29.93	32.1	37.0	♄ Orionis .....	348 14 50.4	-53.7	13 54.2	80 0 30.6	+4.4
11	"	"	"	"	♄ Camelopardalis .....	40 16 51.8	+10.9	17 0.9	27 57 23.9	+17.1
12		29.94	32.4	36.1	♄ Geminorum .....	351 18 3.8	-48.2	17 14.2	76 57 10.6	+5.0
13	"	"	"	"	♄ Aurigæ .....	16 29 25.9	-14.5	29 8.8	51 45 16.0	+10.2
14		29.94	32.2	36.0	♄ Geminorum .....	3 22 42.8	-30.2	22 11.1	64 52 13.7	+6.3
15	"	"	"	"	♄ Canis Minoris .....	346 49 45.4	-56.4	48 46.5	81 25 38.3	+2.4
16		29.94	32.5	35.9	♄ Geminorum .....	7 28 19.6	-25.0	27 53.3	60 46 31.5	+5.3
17	"	"	"	"	♄ Monocerotis .....	337 15 40.5	-78.9	14 19.4	91 0 5.4	-0.3
18		29.94	32.0	35.6	♄ Argus .....	314 24 24.1	-229.5	20 32.0	113 53 52.8	+2.3
19	Feb. 13	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 2.5	.....	.....	.....	.....
20	Feb. 16	29.94	34.0	39.9	* R.A. 8 <sup>h</sup> 4 <sup>m</sup> 55 <sup>s</sup> .....	355 11 22.0	-41.7	10 38.2	73 3 46.6	+1.4
21	"	"	"	"	Lalande 16469 .....	24 22 18.9	-5.9	22 11.2	43 52 13.6	+5.4
22		29.95	33.3	39.1	B.A.C. 2883 .....	307 18 49.1	-440.9	11 25.2	121 2 59.6	-4.4
23	"	"	"	"	♄ 1280 (1st) .....	49 34 34.7	+21.4	34 53.4	18 39 31.4	+6.8
24		29.95	32.9	38.1	B.A.C. 3076 .....	344 27 8.7	-61.2	26 5.6	83 48 19.2	-2.7
25	Feb. 17	30.02	34.1	40.0	♄ Capella .....	24 5 45.2	-6.2	5 36.7	44 8 48.1	+18.0
26	Feb. 18	29.96	27.6	38.1	♄ Capella .....	24 5 46.5	-6.3	5 37.9	44 8 46.9	+18.1
27	"	"	"	"	B.A.C. 1678 .....	337 15 39.4	-79.8	14 17.2	91 0 7.6	+2.6
28		29.95	27.0	36.1	♄ Leporis .....	320 21 33.7	-162.7	18 48.9	107 55 35.9	-2.3

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $g'$  = for Feb. 9, +  $1''$ .6, for Feb. 16, Feb. 17, Feb. 18, +  $1''$ .7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Feb. 9,  $30^{\circ} 0' 2''$ .4, for Feb. 16,  $30^{\circ} 0' 2''$ .6, for Feb. 17,  $30^{\circ} 0' 2''$ .6, for Feb. 18,  $30^{\circ} 0' 2''$ .6.

Feb. 9. An unfavourable night; very hazy and cloudy.

6—11. Cloudy. 15, 28. Unsteady. 22. Nearest division.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.



No. for Ref.	Day of Observation.	Baro- meter.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Feb. 18	29.95	27.0	36.1	o Aurigæ .....	28 0 19.3	— 2.1	0 14.7	40 14 10.1	+18.3
2		29.95	27.0	35.0	B.A.C. 1865 .....	307 41 44.9	—426.9	34 36.0	120 39 48.8	— 5.2
3	"	"	"	"	38 Aurigæ .....	21 9 31.8	— 9.5	9 19.5	47 5 5.3	+15.5
4	"	"	"	"	R.H.C. 889 .....	64 18 32.9	+41.5	19 13.0	3 55 11.8	+24.5
5	29.94	26.6	33.9		R.H.C. 920 .....	64 15 57.9	+41.5	16 37.1	3 57 47.7	+23.7
6	"	"	"	"	56 Aurigæ (2d)...	21 58 33.0	— 8.6	58 23.0	46 16 1.8	+13.3
7	29.95	26.2	33.0		15 Lyncis .....	36 50 46.5	+ 7.3	50 51.5	31 23 33.3	+16.5
8	"	"	"	"	R.H.C. 2859 S.P.	73 44 52.3	+58.3	45 48.0	5 31 23.2	+22.0
9	29.94	25.6	32.5		1 Geminorum .....	6 19 34.7	—26.8	19 5.2	61 55 19.6	+ 6.7
10	"	"	"	"	23 Lyncis .....	35 38 38.7	+ 6.0	38 43.3	32 35 41.5	+12.6
11	"	"	"	"	Pollux .....	6 36 54.5	—26.4	36 26.1	61 37 58.7	+ 5.4
12	29.93	25.7	32.0		9 Puppis .....	324 45 9.3	—131.6	42 55.2	103 31 29.6	— 2.9
13	"	"	"	"	Radcliffe 2069 ...	63 55 3.7	+41.0	55 42.1	4 18 42.7	+14.6
14	29.93	25.6	32.0		* R.A. 8 <sup>h</sup> 4 <sup>m</sup> 55 <sup>s</sup> ..	355 11 24.3	—42.4	10 39.8	73 3 45.0	+ 1.4
15	"	"	"	"	Lalande 16469 ...	24 22 18.6	— 6.0	22 10.8	43 52 14.0	+ 5.7
16	"	"	"	"	Radcliffe 2162 ...	62 38 14.3	+39.1	38 51.9	5 35 32.9	+11.0
17	29.93	25.5	31.2		10 Ursæ Majoris ..	20 35 12.8	—10.1	35 0.2	47 39 24.6	+ 2.0
18	Feb. 19	29.80	31.4	36.9	θ <sup>1</sup> Orionis (1st)...	332 46 57.6	—92.9	45 22.7	95 29 2.1	+ 1.0
19	"	"	"	"	Lalande 10912 ...	2 51 27.5	—30.8	50 54.5	65 23 30.3	+10.4
20	29.79	31.4	36.0		B.A.C. 1881 .....	45 7 26.3	+16.2	7 40.6	23 6 44.2	+22.3
21	29.79	30.7	35.1		8 Lyncis .....	39 50 32.1	+10.4	50 40.0	28 23 44.8	+18.8
22	29.80	31.0	35.0		43 Camelopardali ..	47 17 11.8	+18.7	17 28.5	20 56 56.3	+19.5
23	29.80	30.9	35.0		62 Aurigæ .....	16 29 26.0	—14.4	29 8.7	51 45 16.1	+11.2
24	"	30.4	"	"	20 Monocerotis ...	334 14 45.3	—88.1	13 14.4	94 1 10.4	— 0.3
25	Feb. 20	29.67	30.9	37.0	21 Camelopardali ..	40 6 12.0	+10.7	6 20.4	28 8 4.4	+22.2
26	29.67	30.0	35.1		B.A.C. 2331 .....	8 37 9.5	—23.5	36 44.0	59 37 40.8	+ 8.4
27	"	30.2	"	"	B.A.C. 2390 (2d) ..	51 35 12.6	+23.7	35 33.7	16 38 51.1	+18.0
28	.....	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 2.7	.....	.....	.....	.....
29	Feb. 22	29.60	32.0	38.0	β Tauri .....	6 44 4.9	—25.6	43 36.6	61 30 48.2	+12.2
30	"	"	"	"	χ Aurigæ .....	10 19 58.8	—21.3	19 35.1	57 54 49.7	+13.3

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Feb. 19, +  $1''$ .7, for Feb. 20, +  $1''$ .7, for Feb. 22, +  $1''$ .7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Feb. 19,  $30^{\circ} 0' 2''$ .7, for Feb. 20,  $30^{\circ} 0' 2''$ .7, for Feb. 22,  $30^{\circ} 0' 2''$ .4.

2. Faint. 20, 22. Cloudy. 22. Unsteady. 26. Cloudy after this observation.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Feb. 22	29'60	32'0	38'0	B.A.C. 1808 .....	353 15 10'3	-44'5	14 23'5	75 0 1'3	+7'3
2	"	"	"	"	137 Tauri .....	352 23 15'1	-45'9	22 27'9	75 51 56'9	+6'8
3	"	29'60	31'7	37'0	δ N.L. ....	6 45 23'7	-25'6	51 55'5	61 22 29'3	
4	"	"	"	"	36 Camelopardali .....	43 58 54'5	+14'9	59 6'6	24 15 18'2	+21'8
5	"	"	"	"	κ Aurigæ .....	7 47 49'3	-24'3	47 23'6	60 27 1'2	+11'0
6	"	29'60	31'2	36'6	ζ Canis Majoris .....	308 20 37'5	-38'7'9	14 7'4	120 0 17'4	-5'5
7	"	"	"	"	48 Aurigæ .....	8 49 35'6	-23'1	49 10'0	59 25 14'8	+10'8
8	"	"	"	"	12 Lyncis (1st) ...	37 49 27'9	+8'2	49 33'5	30 24 51'3	+18'1
9	"	29'60	31'0	36'0	59 Aurigæ .....	17 16 53'5	-13'5	16 38'2	50 57 46'6	+12'0
10	"	"	"	"	R.H.C. 1012 .....	62 45 37'8	+38'4	46 14'0	5 28 10'8	+21'4
11	"	29'60	30'7	35'3	B.A.C. 2390 (2d) .....	51 35 12'3	+23'6	35 33'6	16 38 51'2	+18'4
12	"	"	"	"	22 Lyncis .....	28 12 18'0	-1'9	12 14'5	40 2 10'3	+12'4
13	"	29'60	30'6	35'1	B.A.C. 2489 .....	9 30 53'3	-22'3	30 28'9	58 43 55'9	+7'2
14	"	"	"	"	Radcliffe 2020 ...	64 19 38'0	+40'8	20 16'3	3 54 8'5	+17'6
15	"	29'60	30'4	35'0	6 Cancrī .....	233 33 44'3	+26'1	34 9'3	61 48 34'1	+4'4
16	"	"	"	"	ζ <sup>1</sup> Cancrī .....	243 40 30'9	+39'8	41 8'5	71 55 33'3	+1'7
17	"	29'60	29'9	34'5	25 Cancrī .....	244 14 16'4	+40'7	14 54'5	72 29 19'3	+0'8
18	"	"	"	"	γ Cancrī .....	239 46 28'7	+34'2	47 1'0	68 1 25'8	+0'4
19	"	29'59	30'0	34'1	(T) Hydræ .....	329 40 2'0	-104'6	38 15'0	98 36 9'8	-4'4
20	"	29'58	30'0	34'0	75 Cancrī .....	5 27 44'1	-27'3	27 15'3	62 47 9'5	-0'6
21	Feb. 24	30'01	33'7	39'1	β Tauri .....	6 44 6'4	-25'9	43 38'2	61 30 46'6	+12'2
22	"	"	"	"	χ Aurigæ .....	10 19 59'4	-21'5	19 35'9	57 54 48'9	+13'4
23	"	"	"	"	Lalande 10912 ...	2 51 28'4	-30'9	50 56'0	65 23 28'8	+10'4
24	"	30'02	33'1	38'0	ψ <sup>1</sup> Orionis .....	358 29 59'1	-36'9	29 20'2	69 45 4'6	+8'7
25	"	"	"	"	59 Orionis .....	340 4 50'9	-71'5	3 37'3	88 10 47'5	+2'6
26	"	"	"	"	66 Orionis .....	342 25 23'9	-65'9	24 16'1	85 50 8'7	+3'2
27	"	"	"	"	R.H.C. 889 .....	64 18 33'4	+41'2	19 13'9	3 55 10'9	+25'5
28	"	30'03	32'1	37'3	B.A.C. 2095 .....	57 56 38'5	+32'0	57 9'1	10 17 15'7	+23'6
29	"	"	"	"	51 Aurigæ .....	17 45 35'0	-13'1	45 20'1	50 29 4'7	+13'1
30	"	"	"	"	13 Lyncis .....	35 33 15'7	+5'9	33 20'8	32 41 4'0	+17'8
31	"	30'04	31'5	36'9	59 Aurigæ .....	17 16 54'4	-13'7	16 39'4	50 57 45'4	+12'2
32	"	"	"	"	19 Canis Majoris .....	318 19 54'2	-180'8	16 51'4	109 57 33'4	-4'0

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' \cdot 8$ .

Correction for Runs on 5' = for Feb. 24, +  $1'' \cdot 8$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Feb. 24,  $30^{\circ} 0' 2'' \cdot 0$ .

3. Semi-diameter, -  $16' 12'' \cdot 6$ ; Parallax, +  $23' 12'' \cdot 3$ .

4. Nearest division.

11. Companion of the 7'7 Mag.

15—18. To deduce Geoc. N.P.D., for Reflexion observations, add  $188^{\circ} 14' 24'' \cdot 8$  to corrected circle-reading.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, for Direct observations, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' \cdot 8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Feb. 24	30.04	31.0	36.4	B.A.C. 2311 .....	334 12 13.4	-88.9	10 43.3	94 3 41.5	-06
2	"	"	"	"	Piazzi vii. 9 .....	354 34 19.3	-43.1	33 34.0	73 40 50.8	+4.5
3	"	"	"	"	δ Geminorum ...	0 29 31.3	-34.3	28 54.8	67 45 30.0	+5.7
4	"	30.05	30.7	36.0	ε Geminorum .....	6 19 35.9	-26.6	19 7.2	61 55 17.6	+7.1
5	"	"	"	"	ν Geminorum ...	5 27 28.4	-27.7	26 59.6	62 47 25.2	+6.2
6	"	"	"	"	* R.A. 7 <sup>h</sup> 34 <sup>m</sup> 31 <sup>s</sup>	1 51 39.5	-32.4	51 5.7	66 23 19.1	+4.8
7	"	30.06	30.5	35.3	B.A.C. 2590 .....	58 5 37.0	+32.4	6 7.6	10 8 7.2	+16.9
8	"	"	"	"	B.A.C. 2651 .....	308 26 20.3	-39.4	19 48.4	119 54 36.4	-6.0
9	"	"	"	"	B.A.C. 2673 .....	340 58 51.6	-69.7	57 39.5	87 16 45.3	-1.0
10	"	30.07	30.2	35.0	δ N.L. ....	2 47 39.3	-31.2	57 46.9	65 16 37.9	
11	"	"	"	"	31 Lyncis .....	21 53 4.7	-8.7	52 55.1	46 21 29.7	+6.6
12	"	"	"	"	27 Cancrī .....	351 22 26.8	-48.5	21 37.2	76 52 47.6	-0.1
13	"	30.07	29.5	34.6	η Cancrī .....	359 10 20.6	-36.3	9 42.4	69 4 42.4	+1.0
14	"	"	"	"	γ Cancrī .....	0 13 36.2	-34.8	13 0.7	68 1 24.1	+0.5
15	"	"	"	"	(T) Hydræ .....	329 40 1.9	-106.5	38 13.4	98 36 11.4	-4.7
16	"	30.07	28.5	33.9	20 Ursæ Majoris .	38 36 55.6	+9.2	37 3.5	29 37 21.3	+4.0
17	Feb. 25	30.11	30.1	36.2	θ <sup>1</sup> Orionis (1st)...	332 46 57.9	-94.2	45 22.5	95 29 2.3	+0.7
18	"	"	"	"	128 Tauri .....	354 16 32.0	-43.7	15 47.0	73 58 37.8	+7.6
19	"	30.10	30.0	35.6	B.A.C. 1865 .....	307 41 32.7	-426.2	34 25.2	120 39 59.6	-5.9
20	"	"	"	"	2 Geminorum ...	1 54 0.8	-32.5	53 26.0	66 20 58.8	+9.5
21	"	"	"	"	R.H.C. 889 .....	64 18 33.3	+41.5	19 14.2	3 55 10.6	+25.6
22	"	30.10	29.9	34.6	ζ Canis Majoris...	308 20 48.6	-395.5	14 11.5	120 0 13.3	-5.9
23	"	"	"	"	R.H.C. 920 .....	64 15 55.8	+41.5	16 35.7	3 57 49.1	+24.9
24	"	30.10	29.1	34.1	ξ <sup>2</sup> Canis Majoris .	315 26 38.8	-217.4	23 0.1	112 51 24.7	-4.5
25	"	"	"	"	56 Aurigæ (2d)...	21 58 30.4	-8.6	58 21.2	46 16 3.6	+14.0
26	"	"	"	"	60 Aurigæ .....	16 51 29.8	-14.2	51 14.2	51 23 10.6	+12.1
27	"	30.10	28.8	33.8	19 Canis Majoris .	318 19 52.9	-182.2	16 48.8	109 57 36.0	-4.1
28	"	"	"	"	B.A.C. 2311 .....	334 12 12.2	-89.5	10 41.6	94 3 43.2	-06
29	"	"	"	"	B.A.C. 2347 .....	353 49 3.0	-44.6	48 16.2	74 26 8.6	+4.4
30	"	30.10	28.9	33.1	27 Canis Majoris .	312 12 17.4	-275.3	7 41.0	116 6 43.8	-5.5
31	"	"	"	"	ε Geminorum ...	6 19 36.0	-26.7	19 7.3	61 55 17.5	+7.1
32	"	30.09	28.5	33.0	B.A.C. 2470 .....	327 0 5.6	-119.1	58 4.6	101 16 20.2	-2.9

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on  $5'$  = for Feb. 25, +  $1'' .8$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Feb. 25,  $30^{\circ} 0' 1'' .9$ .

6. Scarcely visible.

9. Nearest division.

10. Semi-diameter, -  $16' 8'' .7$ ; Parallax, +  $26' 48'' .6$ . Temperature of the instrument  $34^{\circ} .0$ .

27, 30. Unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	o	o	o	o
1	Feb. 25	30.09	28.5	33.0	23 Lyncis .....	35 38 38.9	+ 6.0	38 44.3	32 35 40.5	+13.8
2	"	"	"	"	R.H.C. 1123 .....	64 19 36.8	+ 41.6	20 16.4	3 54 8.4	+18.3
3	"	30.09	28.4	32.7	9 Puppis .....	324 45 7.1	-131.6	42 53.6	103 31 31.2	-3.8
4	"	"	"	"	B.A.C. 2658 .....	356 53 2.2	-39.8	52 21.6	71 22 3.2	+2.6
5	"	"	"	"	B.A.C. 2703 .....	1 6 43.9	-33.6	6 9.0	67 8 15.8	+3.2
6	"	"	"	"	(R) Cancr. ....	350 24 52.0	-50.4	23 59.7	77 50 25.1	+0.2
7	"	30.08	28.5	32.1	Radcliffe 2129 ...	63 55 6.1	+ 41.0	55 45.2	4 18 39.6	+14.4
8	"	"	"	"	$\eta$ Cancr. ....	359 10 18.9	-36.4	9 40.7	69 4 44.1	+1.1
9	"	"	"	"	$\gamma$ Cancr. ....	0 13 36.8	-34.9	13 1.3	68 1 23.5	+0.6
10	"	30.08	28.4	32.0	(T) Hydre .....	329 40 2.3	-106.7	38 13.7	98 36 11.1	-4.8
11	"	"	"	"	$\delta$ N.L. ....	358 13 14.8	-37.8	27 17.5	69 47 7.3	
12	"	"	"	"	$\pi^3$ Cancr. ....	353 46 50.0	-44.6	46 4.2	74 28 20.6	-2.7
13	"	30.07	28.4	31.9	83 Cancr. ....	356 33 21.4	-40.2	32 40.5	71 41 44.3	-2.6
14	Feb. 26	29.87	28.9	35.3	$\delta$ Aurigæ .....	32 30 47.6	+ 2.7	30 48.9	35 43 35.9	+19.7
15	"	"	"	"	1 Geminorum ...	1 31 11.2	-32.8	30 37.1	66 43 47.7	+9.5
16	"	29.86	28.3	34.6	R.H.C. 889 .....	64 18 32.1	+ 41.3	19 13.0	3 55 11.8	+25.8
17	"	"	28.1	"	$\zeta$ Canis Majoris...	308 20 43.7	-394.0	14 8.3	120 0 16.5	-6.0
18	"	"	"	"	78 Orionis .....	338 4 6.1	-77.2	2 46.9	90 11 37.9	+1.3
19	"	29.85	27.6	33.9	$\xi^3$ Canis Majoris.	315 26 41.8	-216.3	23 4.4	112 51 20.4	-4.6
20	"	"	"	"	38 Geminorum ...	351 36 35.7	-48.0	35 46.6	76 38 38.2	+4.4
21	Feb. 27	29.67	31.5	36.5	41 Aurigæ (2d) ...	26 58 51.3	- 3.1	58 46.3	41 15 38.5	+17.5
22	"	"	31.2	"	$\zeta$ Canis Majoris...	308 20 41.9	-388.7	14 12.0	120 0 12.8	-6.1
23	"	"	"	"	B.A.C. 2095 .....	57 56 39.5	+ 31.7	57 10.3	10 17 14.5	+24.1
24	"	29.67	30.6	35.2	12 Lyncis (1st) ...	37 49 28.2	+ 8.2	49 34.7	30 24 50.1	+18.8
25	"	"	30.7	"	B.A.C. 2266 .....	309 58 52.4	-328.8	53 21.7	118 21 3.1	-6.0
26	"	"	"	"	R.H.C. 1029 .....	62 42 27.2	+ 38.4	43 5.0	5 31 19.8	+21.8
27	"	29.67	30.2	34.6	B.A.C. 2420 .....	307 48 45.6	-414.0	41 51.5	120 32 33.3	-6.5
28	"	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 1.5	.....	.....	.....	.....
29	Mar. 5	29.43	31.5	36.2	60 Aurigæ .....	16 51 30.6	-13.8	51 16.0	51 23 8.8	+12.7
30	"	"	"	"	B.A.C. 2304 .....	347 35 51.7	-54.1	34 56.6	80 39 28.2	+2.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5'$  = for Feb. 26,  $+1''$ .8, for Feb. 27,  $+1''$ .8, for March 5,  $+1''$ .8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Feb. 26,  $30^{\circ} 0' 1''$ .7, for Feb. 27,  $30^{\circ} 0' 1''$ .5, for March 5,  $30^{\circ} 0' 1''$ .3.

11. Semi-diameter,  $-16' 3''$ .3; Parallax,  $+30' 44''$ .5. 14. Ill defined. 17. Very unsteady.  
20. Clouded. 21, 25. Nearest division. 29, 30. Hazy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.  
To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	o	o	o	o
1	Mar. 5	29.42	31.0	35.5	Piazzi vii. 9 .....	354 34 20.7	-42.2	33 37.0	73 40 47.8	+4.6
2	"	"	"	"	ε Geminorum ...	6 19 35.7	-26.0	19 8.3	61 55 16.5	+7.5
3	"	29.41	31.4	34.9	B.A.C. 2489 .....	9 30 52.7	-22.1	30 29.6	58 43 55.2	+7.9
4	"	"	"	"	Groom. 1359 .....	62 41 19.0	+38.1	41 56.3	5 32 28.5	+19.5
5	"	29.39	29.7	34.4	B.A.C. 2655 .....	308 23 22.7	-384.4	16 58.2	119 57 26.6	-7.7
6	"	"	"	"	B.A.C. 2734 .....	11 8 52.4	-20.3	8 30.4	57 5 54.4	+5.9
7	"	29.38	28.7	34.1	Lalande 16469 ...	24 22 20.0	-5.9	22 13.6	43 52 11.2	+8.0
8	"	29.36	28.1	33.9	Σ 1263 (1st) .....	20 27 9.8	-10.0	26 59.3	47 47 25.5	-13.4
9	"	29.34	27.9	33.8	ε Ursæ Majoris ...	26 50 20.9	-3.3	50 16.4	41 24 8.4	+5.7
10	"	"	"	"	ξ Cancr. ....	0 52 2.3	-33.2	51 28.5	67 22 56.3	-0.8
11	"	29.32	27.9	33.0	20 Ursæ Majoris ...	38 36 57.5	+9.0	37 5.9	29 37 18.9	+6.1
12	"	"	"	"	41 Lyncis (2d) ...	24 26 30.4	-5.8	26 23.8	43 48 1.0	+2.3
13	"	29.32	27.5	32.9	33 Hydræ .....	332 58 51.5	-91.5	57 18.3	95 17 6.5	-6.7
14	"	"	"	"	18 Leonis .....	350 42 54.1	-48.6	42 5.2	77 32 19.6	-5.1
15	"	29.30	27.5	32.4	B.A.C. 3393 .....	53 40 16.6	+26.1	40 41.5	14 33 43.3	+4.2
16	Mar. 6	29.01	31.5	35.9	60 Aurigæ .....	16 51 30.6	-13.7	51 16.2	51 23 8.6	+12.7
17	"	"	"	"	39 Geminorum ...	4 30 51.4	-27.8	30 22.6	63 44 2.2	+8.4
18	"	"	"	"	B.A.C. 2304 .....	347 35 49.9	-53.3	34 55.6	80 39 29.2	+2.8
19	"	29.01	30.9	35.0	R.H.C. 1029 .....	62 42 28.5	+37.5	43 5.6	5 31 19.2	+23.0
20	"	29.01	30.7	34.7	B.A.C. 2420 .....	307 48 32.6	-404.5	41 48.1	120 32 36.7	-7.5
21	"	"	"	"	(S) Canis Minoris	346 52 28.8	-54.7	51 33.7	81 22 51.1	+1.4
22	"	29.01	31.0	34.0	B.A.C. 2590 .....	58 5 41.3	+31.2	6 11.5	10 8 13.3	+19.1
23	"	"	"	"	Radcliffe 2069 ...	63 55 7.7	+39.3	55 45.7	4 18 39.1	+18.6
24	"	29.01	30.0	33.6	* R.A. 8 <sup>h</sup> 4 <sup>m</sup> 55 <sup>s</sup> ...	355 11 21.2	-40.7	10 39.7	73 3 45.1	+1.6
25	"	"	"	"	Radcliffe 2129 ...	63 55 8.5	+39.4	55 46.7	4 18 38.1	+16.6
26	"	29.01	29.5	33.0	Σ 1280 (1st) .....	49 34 38.9	+20.9	34 58.4	18 39 26.4	+11.3
27	"	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 1.3	.....	.....	.....	.....
28	Mar. 8	29.37	27.9	36.9	(R) Geminorum...	1 10 12.9	-32.8	9 38.7	67 4 46.1	+5.1
29	"	"	"	"	λ Geminorum ...	355 2 47.0	-41.6	2 4.9	73 12 19.9	+4.5
30	"	29.38	28.4	35.2	B.A.C. 2453 .....	308 10 20.3	-395.0	3 43.9	120 10 40.9	-7.8
31	"	"	"	"	Radcliffe 1979 ...	65 0 3.8	+41.7	0 44.0	3 13 40.8	+21.5

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for March 6, +1''9, for March 8, +1''8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for March 6,  $30^{\circ} 0' 1''$ .3, for March 8,  $30^{\circ} 0' 1''$ .5.

1—3. Hazy.

5. Very unsteady.

6. Nearest division.

9. Cloudy; ill defined.

10. Cloudy.

13. Nearest division.

14, 15. Unsteady.

March 6. An unfavourable and windy night.

19. Minutes noted 4 instead of 42.

20. Faint.

29. Very unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Mar. 8	29.38	28.4	35.2	Radcliffe 2020 ...	64 19 39.1	+ 40.7	20 18.2	3 54 6.6	+20.7
2		29.38	27.8	33.9	R.H.C. 1153 .....	62 40 15.2	+ 38.2	40 52.0	5 33 32.8	+19.3
3		29.38	27.6	33.0	(R) Cancr. ....	350 24 50.2	- 49.3	23 59.3	77 50 25.5	+ 0.2
4	"	"	"	"	B.A.C. 2810 .....	355 53 41.7	- 40.4	53 1.1	72 21 23.7	+ 1.2
5		29.39	27.3	32.7	B.A.C. 2883 .....	307 18 43.2	- 43.5	11 24.5	121 3 0.3	- 8.7
6	"	"	"	"	Σ 1263 (1st) .....	20 27 9.4	- 10.1	26 58.6	47 47.26.2	-13.3
7	"	"	"	"	60 Cancr. ....R.	249 34 49.2	+ 49.4	35 37.0	77 50 1.8	+ 2.0
8		29.40	26.7	31.9	π <sup>1</sup> Cancr. ....R.	246 11 0.0	+ 43.7	11 42.6	74 26 7.4	+ 2.3
9	"	"	"	"	B.A.C. 3199 ...R.	179 49 12.0	- 34.8	48 35.4	8 3 0.2	-10.0
10		29.40	26.0	31.5	12 Leonis .....	R. 235 44 52.6	+ 28.9	45 20.0	63 59 44.8	+ 2.2
11	"	"	"	"	μ Leonis .....	R. 235 4 46.0	+ 28.0	5 12.4	63 19 37.2	+ 3.2
12		29.41	27.3	31.4	13 Sextantis .....	342 8 48.2	- 65.9	7 42.2	86 6 42.6	- 7.3
13	Mar. 9	29.57	32.0	36.4	Lalande 14038 ...	0 27 38.7	- 33.7	27 4.3	67 47 20.5	+ 6.4
14	"	"	"	"	ρ Geminorum ...	10 18 43.0	- 21.3	18 21.4	57 56 3.4	+ 8.8
15		29.57	31.1	36.0	71 Geminorum ...	13 9 16.1	- 18.1	8 56.2	55 5 28.6	+ 9.1
16	"	"	"	"	Groom. 1359 .....	62 41 19.5	+ 38.2	41 56.6	5 32 28.2	+20.3
17		29.57	32.3	35.9	B.A.C. 2651 .....	308 26 10.7	- 38.5	19 47.0	119 54 37.8	- 8.3
18	"	"	"	"	ψ <sup>3</sup> Cancr. ....	4 11 5.2	- 28.8	10 35.2	64 3 49.6	+ 4.4
19		29.57	32.1	35.7	χ Cancr. ....	5 55 23.2	- 26.6	54 55.1	62 19 29.7	+ 4.2
20	"	"	"	"	B.A.C. 2828 .....	314 42 46.7	- 223.0	39 3.0	113 35 21.8	- 7.8
21		29.58	31.7	35.4	B.A.C. 2898 .....	311 57 29.9	- 274.5	52 54.6	116 21 30.2	- 8.4
22	"	"	"	"	Radcliffe 2198 ...	63 28 40.2	+ 39.4	29 19.2	4 45 5.6	+14.9
23		29.57	31.8	35.1	60 Cancr. ....R.	249 34 51.8	+ 49.2	35 39.4	77 50 4.2	+ 2.0
24	"	"	"	"	Σ 1321 (1st) .....	31 32 0.1	+ 1.6	32 0.8	36 42 24.0	+ 5.9
25	"	"	"	"	ε Leonis .....	R. 237 19 35.9	+ 30.8	20 5.0	65 34 29.8	+ 3.0
26		29.58	30.1	35.0	μ Leonis .....	R. 235 4 45.9	+ 28.0	5 12.2	63 19 37.0	+ 3.1
27	"	"	"	"	13 Sextantis .....	342 8 49.0	- 65.9	7 42.8	86 6 42.0	- 7.3
28		29.58	30.1	34.9	34 Leonis .....	352 18 22.2	- 46.1	17 35.6	75 56 49.2	- 6.5
29	Mar. 11	29.95	28.6	35.8	Castor .....	10 26 40.7	- 21.5	26 17.9	57 48 6.9	+ 8.5
30	"	"	"	"	B.A.C. 2526 .....	343 48 43.7	- 63.2	47 39.9	84 26 44.9	+ 0.1
31		29.95	28.9	35.0	B.A.C. 2590 .....	58 5 40.6	+ 32.4	6 11.3	10 8 13.5	+20.0

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for March 9, + 1''·7, for March 11, + 1''·7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for March 9,  $30^{\circ} 0' 1''$ ·6, for March 11,  $30^{\circ} 0' 1''$ ·9.

March 8. (U) Geminorum not visible.

7. Unsteady.

20. Bearing no illumination.

24. Companion of the same magnitude.

7 to 11, 23, 25, and 26. To deduce Geoc. N.P.D., for

Reflexion observations, add  $188^{\circ} 14' 24''$ ·8 to corrected circle-reading.

March 11. An unfavourable, cloudy night.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, for Direct observations, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ ·8.

No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	''	''	o	''
1	Mar. 11	29'95	28'9	34'6	$\zeta^3$ Cancri .....	356 19 24'2	-40'4	18 41'7	71 55 43'1	+2'1
2		29'96	28'5	34'0	$\epsilon$ Ursæ Majoris ...	26 50 22'7	-3'4	50 17'5	41 24 7'3	+6'6
3		29'97	28'4	33'7	$\pi^3$ Cancri .....	353 46 48'2	-44'5	46 2'4	74 28 22'4	-2'4
4		"	"	"	41 Lyncis (1st) ...	24 27 49'6	-5'9	27 42'8	43 46 42'0	+3'3
5		29'97	28'0	33'0	12 Leonis .....	4 15 12'1	-29'3	14 41'0	63 59 43'8	-2'0
6		29'98	27'5	32'9	B.A.C. 3476 .....	331 38 47'5	-98'5	37 8'4	96 37 16'4	-8'9
7	Mar. 17	30'12	43'0	47'8	B.A.C. 3169 .....	30 5 57'9	+0'1	5 55'7	38 8 29'1	+6'5
8		"	"	"	41 Lyncis (1st) ...	24 27 53'0	-5'7	27 45'5	43 46 39'3	+4'3
9		30'11	42'4	47'2	12 Leonis .....	4 15 12'7	-28'6	14 41'6	63 59 43'2	-1'5
10		"	"	"	$\nu$ Ursæ Majoris ...	37 56 39'8	+8'3	56 46'0	30 17 38'8	+5'2
11		"	"	"	7 Leonis .....	355 42 15'3	-40'5	41 32'8	72 32 52'0	-5'4
12		30'11	41'5	46'9	35 Leonis .....	2 27 20'5	-31'0	26 47'6	65 47 37'2	-4'8
13		"	"	"	B.A.C. 3563 .....	331 55 10'9	-95'1	53 33'3	96 20 51'5	-9'9
14		30'11	41'1	46'0	B.A.C. 3629 .....	59 23 52'3	+33'5	24 22'9	8 50 1'9	+3'5
15	Mar. 22	30'41	45'9	52'0	B.A.C. 2526 .....	343 48 45'8	-61'9	47 41'6	84 26 43'2	+0'3
16		"	"	"	B. Z. 279. 165 ...	0 17 27'7	-33'9	16 51'1	67 57 33'7	+4'7
17		30'40	44'6	51'1	B.A.C. 2703 .....	1 6 45'4	-32'9	6 9'6	67 8 15'2	+4'3
18		"	"	"	(R) Cancri .....	350 24 51'1	-49'3	23 58'4	77 50 26'4	+0'3
19		30'41	43'5	50'9	$\nu^1$ Cancri (2d) ...	3 14 59'3	-30'1	14 25'8	64 59 59'0	+3'8
20		30'41	43'1	50'4	B.A.C. 2883 .....	307 18 41'8	-438'2	11 21'2	121 3 3'6	-10'9
21		"	"	"	$\Sigma$ 1263 (1st) .....	20 27 12'2	-10'1	26 59'3	47 47 25'5	-11'9
22		30'41	42'6	50'0	17 Hydræ (South) ...	330 50 9'4	-99'9	48 26'1	97 25 58'7	-6'9
23		"	"	"	15 Ursæ Majoris .	30 25 4'4	+0'4	25 1'4	37 49 23'4	+8'6
24		"	"	"	B.A.C. 3169 .....	30 5 59'3	+0'1	5 56'3	38 8 28'5	+7'4
25		30'42	41'6	49'1	41 Lyncis (2d) ...	24 26 35'0	-5'8	26 26'2	43 47 58'6	+5'1
26		"	"	"	18 Leonis .....	350 42 54'9	-49'1	42 3'2	77 32 21'6	-4'8
27		30'41	40'6	48'5	$\pi$ Leonis .....	346 58 45'1	-56'0	57 45'4	81 16 39'4	-6'5
28		30'42	40'9	48'0	Radcliffe 2507 ...	63 42 43'3	+40'1	43 20'8	4 31 4'0	+6'0
29		"	"	"	B.A.C. 3665 .....	25 11 26'8	-5'1	11 18'7	43 3 6'1	-2'1
30		"	"	"	47 Leonis Min. ...	13 2 11'6	-18'3	1 50'5	55 12 34'3	-5'6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24'' \cdot 8$ .

Correction for Runs on 5' = for March 17, +  $1'' \cdot 4$ , for March 22, +  $1'' \cdot 4$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for March 17,  $30^\circ 0' 2'' \cdot 6$ ; for March 22,  $30^\circ 0' 3'' \cdot 4$ .

2. Ill defined; two close companions?

12—14. Unsteady.

14. Nearest division.

20. Very faint.

21—27. Filmy.

26. Unsteady.

27. Nearest division; very unsteady.

28—30. Filmy; unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24'' \cdot 8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.	
			Ext.	Int.							
	1858.	In.	o	o		o	'	"	o	'	"
1	Mar. 23	30.26	47.4	52.0	♂ N. L. ....	3 56 49.5	— 28.8	65 49.9	64 8 34.9	.....	
2	"	"	"	"	ψ <sup>3</sup> Cancri .....	4 11 7.8	— 28.5	10 36.0	64 3 48.8	+ 5.2	
3	"	30.26	46.8	52.1	B.A.C. 2788 .....	359 26 38.3	— 34.8	26 0.4	68 48 24.4	+ 3.0	
4	"	"	"	"	R.H.C. 1233 .....	62 38 24.6	+ 37.8	38 59.8	5 35 25.0	+ 18.9	
5	"	30.26	45.0	52.0	Σ 1263 (2d) .....	20 27 37.7	— 9.9	27 24.9	47 46 59.9	— 11.7	
6	"	30.25	44.5	51.6	B.A.C. 3076 .....	344 27 4.7	— 60.4	26 1.3	83 48 23.5	— 3.8	
7	"	30.25	44.2	51.2	Radcliffe 2295 ...	65 58 49.4	+ 43.0	59 28.5	2 14 56.3	+ 14.9	
8	"	30.25	43.7	51.0	R.H.C. 1407 .....	62 12 21.0	+ 37.4	12 55.5	6 1 29.3	— 8.7	
9	"	30.25	43.1	50.9	19 Leonis .....	350 28 34.2	— 49.0	27 42.6	77 46 42.2	— 4.9	
10	"	30.25	43.9	50.2	π Leonis .....	346 58 43.6	— 55.3	57 44.3	81 16 40.5	— 6.5	
11	"	"	"	"	Groom. 1618 .....	28 24 47.0	— 1.6	24 41.7	39 49 43.1	+ 2.0	
12	Mar. 24	29.98	55.1	54.2	6 Cancri .....	6 26 20.8	— 25.1	25 52.3	61 48 32.5	+ 6.3	
13	"	"	"	"	ψ <sup>3</sup> Cancri .....	4 11 7.0	— 27.8	10 35.7	64 3 49.1	+ 5.2	
14	"	29.99	54.4	55.0	31 Lyncis .....	21 53 10.6	— 8.2	52 59.5	46 21 25.3	+ 10.1	
15	"	"	"	"	♂ N. L. ....	359 56 53.2	— 33.4	69 20.3	68 5 4.5	.....	
16	"	"	"	"	ξ Cancri .....	0 52 3.5	— 32.2	51 28.1	67 22 56.7	+ 0.4	
17	"	29.99	50.8	54.8	83 Cancri .....	356 33 22.7	— 38.3	32 41.5	71 41 43.3	— 1.6	
18	"	"	"	"	3 Leonis .....	347 3 37.7	— 54.0	2 40.9	81 11 43.9	— 4.6	
19	"	29.99	49.6	54.0	Radcliffe 2368 ...	65 28 50.5	+ 41.4	29 27.8	2 44 57.0	+ 12.1	
20	"	29.99	49.6	53.4	21 Leonis Min. ...	14 10 49.6	— 16.5	10 29.5	54 3 55.3	— 0.7	
21	"	"	"	"	39 Leonis .....	2 3 56.7	— 30.9	3 21.7	66 11 3.1	— 4.3	
22	"	29.99	47.6	52.9	ρ Leonis .....	348 17 22.3	— 52.0	16 27.2	79 57 57.6	— 8.1	
23	"	29.99	47.0	52.2	ι Leonis .....	349 32 54.4	— 49.8	32 1.6	78 42 23.2	— 8.9	
24	Mar. 26	30.05	41.9	49.8	17 Hydræ (South)	330 50 7.1	— 98.9	48 24.0	97 26 0.8	— 7.1	
25	"	"	"	"	15 Ursæ Majoris .	30 25 5.5	+ 0.4	25 1.7	37 49 23.1	+ 9.2	
26	"	30.04	41.5	48.7	π <sup>3</sup> Cancri .....	353 46 50.4	— 43.4	46 3.4	74 28 21.4	— 1.9	
27	"	"	"	"	Lalande 18631 ...	12 25 1.0	— 18.8	24 38.0	55 49 46.8	+ 2.3	
28	"	30.03	40.2	47.1	18 Leonis .....	350 42 56.6	— 48.5	42 4.8	77 32 20.0	— 4.7	
29	"	"	"	"	ν Leonis .....	351 22 25.5	— 47.5	21 34.5	76 52 50.3	— 5.3	
30	"	30.03	39.1	46.2	Regulus .....	350 54 46.9	— 48.3	53 54.3	77 20 30.5	— 6.0	
31	"	"	"	"	R.H.C. 1540 .....	63 21 11.3	+ 39.2	21 46.7	4 52 38.1	+ 8.2	

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' \cdot 8$ .

Correction for Runs on  $5''$  = for March 23,  $+ 1'' \cdot 4$ , for March 24,  $+ 1'' \cdot 4$ , for March 26,  $+ 1'' \cdot 5$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for March 23,  $30^{\circ} 0' 3'' \cdot 6$ , for March 24,  $30^{\circ} 0' 3'' \cdot 8$ , for March 26,  $30^{\circ} 0' 4'' \cdot 2$ .

1. Semi-diameter,  $- 16' 2'' \cdot 0$ ; Parallax,  $+ 25' 34'' \cdot 3$ . 1—11. Very hazy.

3, 6, 8, 22. Unsteady. 5. Faint. 7, 10, 19, 21. Nearest division.

10, 25, 26. Very unsteady. 15. Semi-diameter,  $- 15' 55'' \cdot 8$ ; Parallax,  $+ 28' 59'' \cdot 6$ .

20. Filmy. 22, 23. Cloudy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' \cdot 8$ .



No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Mar. 26	30.04	38.1	45.1	♃ N. L. ....	348 43 3.5	-52.3	64 8.1	79 10 16.7	.....
2		"	"	"	♄ Leonis ....	345 7 7.1	-59.3	6 4.2	83 8 20.6	-10.3
3		30.04	38.1	44.2	♅ Leonis ....	346 21 24.5	-56.9	20 23.8	81 54 1.0	-10.3
4	Mar. 27	.....	...	...	Wire (Nad. Obs.) R.	210 0 4.4	.....	.....	.....	.....
5	Mar. 29	29.73	45.0	51.0	♄ <sup>1</sup> Cancri ....	3 14 54.2	-29.3	14 20.7	65 0 4.1	+4.2
6		29.73	44.0	50.5	B.A.C. 2898 ....	311 57 24.9	-268.8	52 52.7	116 21 32.1	-10.9
7		"	"	"	♄ 1263 (2d) ....	20 27 37.8	-9.8	27 24.6	47 47 0.2	-10.9
8		29.73	44.0	49.9	B.A.C. 3025 ....	24 25 4.7	-5.7	24 54.8	43 49 30.0	+8.9
9		"	"	"	♄ Ursæ Majoris ...	42 19 42.8	+12.8	19 51.3	25 54 33.5	+12.7
10		29.72	43.4	49.1	Radcliffe 2295 ...	65 58 49.6	+42.4	59 27.4	2 14 57.4	+16.1
11		"	"	"	33 Hydræ ....	332 58 50.3	-89.8	57 15.9	95 17 8.9	-8.3
12		29.71	42.4	48.6	19 Leonis ....	350 28 34.9	-48.2	27 43.6	77 46 41.2	-4.7
13		"	"	"	♄ Leonis ....	351 22 23.4	-46.8	21 33.2	76 52 51.6	-5.1
14		29.71	41.1	48.0	Groom. 1618 ....	28 24 47.1	-1.6	24 41.2	39 49 43.6	+3.1
15		"	"	"	B.A.C. 3567 ....	27 47 0.5	-2.3	46 54.6	40 27 30.2	+1.4
16		29.70	41.5	47.3	B.A.C. 3665 ....	25 11 27.9	-4.9	11 19.3	43 3 5.5	-0.8
17		"	"	"	47 Leonis Minoris	13 2 11.8	-17.9	1 50.4	55 12 34.4	-4.5
18		"	"	"	Lalande 21185 ...	15 9 52.3	-15.6	9 32.5	53 4 52.3	-4.9
19		29.70	39.4	47.0	♄ Leonis ....	359 32 58.7	-34.6	32 20.9	68 42 3.9	-8.7
20		"	"	"	80 Leonis ....	342 53 48.9	-63.2	52 42.7	85 21 42.1	-11.9
21		"	"	"	Radcliffe 2738 ...	64 32 58.9	+40.3	33 36.0	3 40 48.8	-0.7
22		29.68	39.0	46.0	Radcliffe 2775 ...	66 0 49.3	+42.7	1 28.1	2 12 56.7	-2.4
23		"	"	"	B.A.C. 4111 ....	56 27 42.8	+29.3	28 8.8	11 46 16.0	-5.3
24		29.67	38.0	45.1	♄ Virginis ....	331 3 1.3	-97.6	1 20.5	97 13 4.3	-15.5
25		"	"	"	B.A.C. 4306 ....	331 24 19.9	-96.3	22 39.2	96 51 45.6	-15.8
26		29.67	37.1	44.9	♃ S. L. ....	329 2 54.3	-105.9	65 1.0	98 9 23.8	.....
27		"	"	"	18 Can. Venat. ...	19 47 17.4	-10.6	47 3.3	48 27 21.5	-16.0
28		"	"	"	Spica ....	327 50 54.5	-111.3	48 59.3	100 25 25.5	-16.4
29		29.66	36.5	44.0	♄ Virginis ....	328 50 3.2	-106.9	48 12.1	99 26 12.7	-16.5
30	April 1	29.77	32.4	46.0	Groom. 1618 ....	28 24 47.5	-1.7	24 42.0	39 49 42.8	+3.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for March 29, +1".6, for April 1, +1".6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for March 29,  $30^{\circ} 0' 4''$ .2, for April 1,  $30^{\circ} 0' 3''$ .7.

1. Semi-diameter, -15' 41".2; Parallax, +37' 41".4. Undulating.

2, 3. Hazy; unsteady. 10, 11. Nearest division. 22. Cloudy. 24, 28, 29. Very unsteady.

26. Semi-diameter, +15' 15".6; Parallax, +48' 40".3. Great undulation.

April 1. A very unfavourable night. Stars unsteady and ill-defined.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o / "	"	/ "	o / "	"
1	April 1	29.77	31.3	44.0	$\mu$ Hydræ .....	322 9 57.7	-146.2	7 27.8	106 6 57.0	-12.6
2		29.77	30.5	42.9	B.A.C. 3629 .....	59 23 55.3	+33.8	24 25.1	8 49 59.7	+7.5
3		29.76	30.2	41.9	$\iota$ Leonis .....	349 32 56.5	-51.2	32 2.5	78 42 22.3	-8.7
4		29.76	28.8	41.1	$\epsilon$ Leonis .....	345 7 10.4	-60.0	6 7.4	83 8 17.4	-10.2
5		29.77	28.2	40.1	$\delta$ Leonis .....	359 33 1.4	-35.5	32 23.2	68 42 1.6	-8.4
6		29.77	28.1	39.1	$\epsilon$ Ursæ Majoris ..	22 11 40.6	-8.3	11 29.1	46 2 55.7	-5.5
7		29.78	28.0	38.8	$\epsilon$ Ursæ Majoris ..	13 14 54.7	-18.2	14 32.8	54 59 52.0	-8.1
8	April 3	29.50	48.0	49.0	Radcliffe 2295 ...	65 58 50.4	+41.7	59 28.3	2 14 56.5	+17.0
9	"	"	"	"	$\iota$ Leonis Min. ....	14 41 47.9	-15.7	41 29.4	53 32 55.4	+3.4
10		29.52	47.5	49.4	$\iota$ Leonis Min. ....	24 55 26.3	-5.1	55 18.0	43 19 6.8	+5.3
11	.....	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 3.4	.....	.....	.....	.....
12	Apr. 10	29.75	38.0	45.0	$\epsilon$ Ursæ Majoris ..	41 55 13.2	+12.5	55 23.2	26 19 1.6	+12.5
13	"	"	"	"	$\iota$ Hydræ .....	337 45 34.7	-76.2	44 16.1	90 30 8.7	-7.6
14		29.76	36.6	43.5	Radcliffe 2404 ...	62 49 54.5	+38.2	50 30.1	5 23 54.7	+14.5
15		29.76	36.0	43.0	B.A.C. 3452 .....	308 8 42.3	-395.0	2 6.0	120 12 18.8	-15.4
16	"	"	"	"	$\gamma^1$ Leonis .....	358 48 29.9	-36.0	47 52.6	69 26 32.2	-4.0
17		29.76	35.1	42.0	$\rho$ Leonis .....	348 17 23.9	-53.0	16 29.2	79 57 55.6	-7.5
18	"	"	"	"	B.A.C. 3665 .....	25 11 29.9	-5.0	11 22.8	43 3 2.0	+1.5
19		29.76	34.4	41.1	$\epsilon$ Leonis .....	339 45 5.2	-71.5	43 51.1	88 30 33.7	-10.9
20	"	"	"	"	$\epsilon$ Leonis .....	340 58 59.3	-68.5	57 47.8	87 16 37.0	-11.2
21		29.76	33.6	40.5	$\epsilon$ Leonis .....	341 2 52.6	-68.4	1 42.6	87 12 42.2	-11.7
22	.....	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 2.6	.....	.....	.....	.....
23	Apr. 13	29.94	37.6	46.0	B.A.C. 3764 .....	54 26 22.3	+27.0	26 46.5	13 47 38.3	+6.8
24		29.94	37.0	45.1	$\delta$ Leonis .....	359 33 2.0	-35.0	32 24.7	68 42 0.1	-7.2
25	"	"	"	"	$\iota$ Leonis .....	349 33 49.6	-50.8	32 56.8	78 41 28.0	-10.0
26		29.94	36.7	44.4	$\epsilon$ Leonis .....	342 6 16.8	-65.9	5 8.0	86 9 16.8	-12.2
27		29.94	36.3	43.9	$\beta$ Leonis .....	353 36 59.5	-43.9	36 13.0	74 38 11.8	-10.9
28	"	"	"	"	B.A.C. 4059 .....	22 8 12.2	-8.3	8 1.7	46 6 23.1	-6.1
29	"	"	"	"	$\delta$ Ursæ Majoris ...	36 3 35.4	+6.4	3 39.7	32 10 45.1	-4.7
30		29.94	35.4	42.6	B.A.C. 4184 .....	2 57 41.6	-30.5	57 8.7	65 17 16.1	-11.5

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for April 3, +  $1''$ .7, for April 10, +  $1''$ .8, for April 13, +  $1''$ .7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for April 3,  $30^\circ 0' 3''$ .4, for April 10,  $30^\circ 0' 2''$ .6, for April 13,  $30^\circ 0' 3''$ .3.

2, 8, 20. Nearest division. April 3. Clouds passing. 13, 16, 17, 18, 27. Unsteady.  
19. Unsteady and ill defined. April 13. A hazy night.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Baro- meter.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Apr. 15	29.80	54.0	53.1	34 Leonis .....	352 18 25.1	-44.2	17 38.3	75 56 46.5	-4.9
2	"	"	"	"	$\beta$ Leonis Minoris	15 40 45.2	-14.6	40 27.1	52 33 57.7	+1.0
3	"	29.81	53.0	54.8	B.A.C. 3747 .....	56 45 51.3	+28.9	46 16.7	11 28 8.1	+8.1
4	"	29.81	50.6	54.7	$\nu$ Leonis .....	338 13 4.6	-73.1	11 48.7	90 2 36.1	-13.1
5	"	"	"	"	* R.A. 11 <sup>h</sup> 55 <sup>m</sup> 3 <sup>s</sup>	22 10 23.3	-7.9	10 11.7	46 4 13.1	-6.1
6	"	29.81	50.5	54.1	$\delta$ Ursæ Majoris...	36 3 36.7	+6.1	3 40.2	32 10 44.6	-4.2
7	Apr. 17	30.03	45.6	53.0	$\gamma^1$ Leonis .....	358 48 30.7	-35.5	47 52.0	69 26 32.8	-3.4
8	"	"	"	"	37 Ursæ Majoris.	36 3 12.9	+6.2	3 15.8	32 11 9.0	+6.3
9	"	30.04	44.4	52.1	34 Sextantis .....	342 34 50.1	-64.0	33 41.7	85 40 43.1	-9.4
10	"	"	"	"	55 Leonis .....	339 45 3.6	-70.7	43 48.6	88 30 36.2	-10.8
11	"	30.04	44.5	52.0	75 Leonis .....	341 2 51.4	-67.5	1 40.5	87 12 44.3	-11.5
12	"	"	"	"	58 Ursæ Majoris.	22 11 43.5	-8.1	11 31.7	46 2 53.1	-2.3
13	"	"	"	"	59 Ursæ Majoris.	22 39 18.5	-7.6	39 6.4	45 35 18.4	-2.9
14	"	30.05	43.1	51.8	$\beta$ Virginis .....	340 49 17.5	-68.3	48 4.7	87 26 20.1	-13.2
15	.....	.....	.....	.....	Wire (Nad. Obs.) R.	210 0 4.3	.....	.....	.....	.....
16	Apr. 19	29.92	50.0	55.4	38 Leonis Minoris	16 53 38.1	-13.5	53 21.6	51 21 3.2	+8.1
17	"	29.92	50.2	55.7	$\nu$ Hydræ .....	322 49 24.2	-136.8	47 3.0	105 27 21.8	-14.6
18	"	"	"	"	Radcliffe 2612 ...	64 38 27.7	+40.1	39 4.7	3 35 20.1	+9.2
19	"	29.93	49.1	55.3	B.A.C. 3855 .....	333 58 29.7	-86.0	57 0.6	94 17 24.2	-13.2
20	"	"	"	"	B.A.C. 3920 .....	332 34 42.2	-90.8	33 7.1	95 41 17.7	-14.0
21	"	29.92	47.5	55.1	B.A.C. 3971 .....	343 47 15.5	-60.7	46 11.3	84 28 13.5	-12.1
22	"	"	"	"	* R.A. 11 <sup>h</sup> 55 <sup>m</sup> 3 <sup>s</sup>	22 10 25.6	-8.0	10 13.5	46 4 11.3	-5.3
23	"	29.92	45.1	54.7	B.A.C. 4112 .....	56 38 18.0	+29.4	38 44.3	11 35 40.5	+0.7
24	"	"	"	"	B.A.C. 4184 .....	2 57 42.6	-29.8	57 9.5	65 17 15.3	-10.7
25	"	29.92	45.9	53.9	6 Draconis .....	49 2 22.0	+20.2	2 38.8	19 11 46.0	-3.1
26	"	29.91	44.6	53.0	7 Draconis .....	45 48 6.4	+16.6	48 19.8	22 26 5.0	-5.0
27	Apr. 20	30.00	53.2	56.2	B.A.C. 3515 .....	23 0 47.4	-7.1	0 36.5	45 13 48.3	+4.6
28	"	"	"	"	B.A.C. 3563 .....	331 55 6.1	-92.5	53 29.5	96 20 55.3	-11.4
29	"	30.01	53.0	56.5	$\rho$ Leonis .....	348 17 24.5	-51.5	16 29.7	79 57 55.1	-7.1
30	"	30.01	53.0	56.4	$\nu$ Hydræ .....	322 49 23.9	-136.4	47 3.2	105 27 21.6	-14.6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $39^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for April 15, +1''-7, for April 17, 19, and 20, +1''-6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for April 15,  $30^{\circ} 0' 3''$ .8, for April 17,  $30^{\circ} 0' 4''$ .3, for April 19,  $30^{\circ} 0' 4''$ .2, for April 20,  $30^{\circ} 0' 4''$ .1.

April 15, 17, 19, and 20. Very hazy.

7, 14, 30. Unsteady. 23-26. Very unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Apr. 20	30°01	53°0	56°4	47 Urse Majoris .	19 25 55.3	-10.8	25 40.7	48 48 44.1	+0.2
2		30°02	52°5	56°2	69 Leonis .....	338 57 36.9	-71.4	56 22.2	89 18 2.6	-11.8
3		"	"	"	Radcliffe 2684 ...	63 43 14.6	+38.7	43 50.2	4 30 34.6	+6.8
4		30°02	51°4	56°0	Radcliffe 2738 ...	64 33 6.9	+39.9	33 43.7	3 40 41.1	+5.2
5		30°02	51°0	55°9	B.A.C. 4020 .....	335 16 29.1	-81.9	15 3.6	92 59 21.2	-14.3
6		30°02	50°2	55°6	B.A.C. 4112 .....	56 38 18.5	+29.2	38 44.7	11 35 40.1	+1.0
7		"	"	"	B.A.C. 4184 .....	2 57 41.6	-29.7	57 8.7	65 17 16.1	-10.5
8		30°03	50°2	55°1	24 Comæ (2nd)...	357 24 27.3	-37.2	23 45.8	70 50 39.0	-12.2
9		"	"	"	B.A.C. 4306 .....	331 24 18.6	-95.1	22 39.2	96 51 45.6	-16.7
10		30°03	49°6	54°9	12 Can. Ven. (1st)	17 19 27.3	-13.1	19 9.9	50 55 14.9	-10.3
11	Apr. 21	30°17	53°5	58°3	48 Leonis .....	345 56 18.0	-56.1	55 18.2	82 19 6.6	-7.9
12		"	"	"	1 Leonis .....	349 32 54.3	-49.5	32 1.6	78 42 23.2	-7.6
13		"	"	"	47 Urse Majoris .	19 25 56.3	-10.8	25 41.7	48 48 43.1	+0.3
14		30°18	52°3	58°0	Lalande 21185 ...	15 9 56.8	-15.4	9 37.3	53 4 47.5	-1.2
15		"	"	"	73 Leonis .....	352 19 60.1	-44.9	19 11.1	75 55 13.7	-8.4
16		30°18	51°9	57°9	ε Crateris .....	328 11 10.2	-108.2	9 18.3	100 5 6.5	-14.7
17		"	"	"	ν Leonis .....	338 13 5.5	-73.9	11 48.4	90 2 36.4	-13.0
18		30°18	51°1	57°4	β Leonis .....	353 36 56.7	-43.0	36 10.2	74 38 14.6	-10.2
19		"	"	"	γ Virginis .....	342 42 5.5	-63.2	40 58.8	85 33 26.0	-13.1
20		30°18	50°4	56°9	9 Comæ .....	7 11 47.9	-24.6	11 19.7	61 3 5.1	-9.1
21		"	"	"	20 Comæ .....	359 55 50.8	-33.8	55 13.2	68 19 11.6	-11.3
22		30°18	49°8	56°5	ψ Virginis .....	331 2 59.3	-96.9	1 19.2	97 13 5.6	-16.4
23		30°18	49°4	56°0	δ Virginis .....	342 25 27.4	-64.0	24 19.4	85 50 5.4	-15.5
24	Apr. 22	30°27	56°4	61°5	37 Urse Majoris .	36 3 15.2	+6.1	3 18.3	32 11 6.5	+7.1
25		"	"	"	B.A.C. 3652 .....	48 3 20.5	+18.9	3 36.4	20 10 48.4	+9.3
26		30°27	55°3	61°1	52 Leonis .....	353 11 43.2	-43.4	10 56.3	75 3 28.5	-6.3
27		"	"	"	B.A.C. 3741 .....	12 30 38.3	-18.3	30 16.2	55 44 8.6	-1.2
28		30°27	54°7	60°8	Radcliffe 2594 ...	66 38 27.1	+43.2	39 7.3	1 35 17.5	+10.3
29		30°27	54°4	60°3	β Crateris .....	316 14 23.9	-196.9	11 2.8	112 3 22.0	-16.8
30		"	53°9	"	δ Crateris .....	324 15 44.1	-128.3	13 32.0	104 0 52.8	-15.4
31		"	"	"	83 Leonis (2nd)...	342 2 8.2	-64.5	1 0.3	86 13 24.5	-11.6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5' =$  for April 21,  $+1''$ .5, for April 22,  $+1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for April 21,  $30^{\circ} 0' 4''$ .1, for April 22,  $30^{\circ} 0' 4''$ .0.

11—23. Very hazy. 6. Unsteady. 23. Unsteady, and ill defined.  
31. Companion of the  $6\frac{1}{2}$  Mag.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Apr. 22	30.27	52.9	59.8	Crateris .....	325 50 59.1	-119.8	48 55.6	102 25 29.2	-15.7
2	"	"	"	"	B.A.C. 3992 .....	353 19 25.1	-43.5	18 37.4	74 55 47.4	-10.0
3	"	"	"	"	Radcliffe 2774 ...	66 1 2.6	+42.5	1 41.4	2 12 43.4	+4.2
4	"	30.27	50.5	58.4	Radcliffe 2815 ...	65 57 10.5	+42.5	57 49.7	2 16 35.1	+2.6
5	"	"	"	"	W. B. xii. 276 ...	327 26 42.6	-112.3	24 46.8	100 49 38.0	-16.7
6	"	"	"	"	* R.A. 12 <sup>h</sup> 32 <sup>m</sup> 29 <sup>s</sup>	47 32 56.1	+18.5	33 11.5	20 41 13.3	-2.9
7	"	30.26	50.5	57.0	ε Ursæ Majoris ...	34 58 10.7	+5.1	58 12.8	33 16 12.0	-6.6
8	Apr. 23	30.04	54.5	60.9	ρ Leonis .....	348 17 23.5	-51.4	16 28.9	79 57 55.9	-7.0
9	"	"	"	"	ι Leonis .....	349 32 56.3	-49.2	32 4.1	78 42 20.7	-7.5
10	"	"	"	"	B.A.C. 3764 .....	54 26 25.7	+26.2	26 48.4	13 47 36.4	+8.8
11	"	30.03	53.0	60.0	δ N. L. ....	344 20 55.8	-59.1	44 46.5	83 29 38.3	.....
12	"	"	"	"	B.A.C. 3855 .....	333 58 30.0	-85.6	57 1.6	94 17 23.2	-13.2
13	"	"	"	"	τ Leonis .....	341 53 38.0	-64.4	52 30.8	86 21 54.0	-11.7
14	"	"	"	"	89 Leonis .....	342 6 15.4	-64.0	5 7.9	86 9 16.9	-11.9
15	"	30.01	52.0	58.2	Radcliffe 2774 ...	66 1 0.5	+42.1	1 39.0	2 12 45.8	+4.4
16	"	"	"	"	Radcliffe 2815 ...	65 57 11.4	+42.0	57 50.2	2 16 34.6	+2.8
17	"	30.01	51.5	57.9	W. B. xii. 276 ...	327 26 42.3	-111.1	24 47.8	100 49 37.0	-16.7
18	"	"	"	"	* R.A. 12 <sup>h</sup> 32 <sup>m</sup> 29 <sup>s</sup>	47 32 57.9	+18.3	33 13.2	20 41 11.6	-2.7
19	"	"	"	"	* R.A. 12 <sup>h</sup> 43 <sup>m</sup> 0 <sup>s</sup>	47 21 47.5	+18.2	22 2.3	20 52 22.5	-3.8
20	"	30.00	50.3	56.9	ε Virginis .....	349 58 27.2	-48.8	57 35.5	78 16 49.3	-14.5
21	Apr. 24	30.00	48.7	57.1	55 Leonis .....	339 45 4.4	-70.0	43 50.5	88 30 34.3	-10.6
22	"	"	"	"	Radcliffe 2612 ...	64 38 27.0	+40.3	39 4.4	3 35 20.4	+10.1
23	"	30.00	48.1	55.4	73 Leonis .....	352 20 1.1	-45.0	19 12.2	75 55 12.6	-8.2
24	"	"	"	"	τ Leonis .....	341 53 37.5	-65.0	52 29.7	86 21 55.1	-11.6
25	"	"	"	"	89 Leonis .....	342 6 15.9	-64.5	5 7.9	86 9 16.9	-11.9
26	"	29.99	47.6	54.0	β Leonis .....	353 36 58.6	-43.0	36 12.3	74 38 12.5	-9.9
27	"	"	"	"	δ N. L. ....	337 59 20.6	-74.6	86 48.0	89 47 36.8	.....
28	"	"	"	"	10 Virginis .....	340 57 6.3	-67.2	55 55.8	87 18 29.0	-13.7
29	"	29.98	47.8	53.1	η Virginis .....	338 22 48.6	-73.5	21 32.0	89 52 52.8	-14.6
30	"	.....	...	...	Wire (Nad. Obs.) R.	210 0 3.9	.....	.....	.....	.....

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude = 38° 14' 24".8.

Correction for Runs on 5' = for April 23, +1".5, for April 24, +1".5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for April 23, 30° 0' 3".9, for April 24, 30° 0' 3".9.

11. Semi-diameter, -15' 30".2; Parallax, +40' 23".6.

26. Very unsteady.

27. Clouds passing; great undulation; Semi-diameter, -15' 21".4; Parallax, +44' 7".5.

28, 29. Cloudy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from 68° 14' 24".8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	o	o	o	o
1	Apr. 27	29.96	42.8	54.1	B.A.C. 3861 .....	343 54 52.6	- 61.1	53 47.8	84 20 37.0	-10.6
2	Apr. 30	28.95	40.9	50.1	72 Ursæ Majoris .	34 11 7.0	+ 4.2	11 8.0	34 3 16.8	- 2.1
3	"	"	"	"	$\kappa$ Draconis.....	48 48 25.2	+ 19.5	48 42.1	19 25 42.7	- 0.1
4	"	28.95	40.4	47.9	32 Comæ .....	356 5 44.9	- 38.4	5 3.2	72 9 21.6	-12.2
5	"	"	"	"	78 Ursæ Majoris .	35 22 15.1	+ 5.4	22 17.6	32 52 7.2	- 5.1
6	"	28.95	40.6	46.9	18 Can. Venat. ...	19 47 25.3	- 10.3	47 12.1	48 27 12.7	- 8.9
7	"	28.94	40.1	46.0	W. B. xiii. 375 ...	331 8 1.1	- 94.5	6 23.9	97 8 0.9	-17.6
8	May 1	29.08	39.7	49.0	Spica .....	327 50 51.1	-108.5	48 59.4	100 25 25.4	-17.9
9	"	29.08	40.0	48.3	24 Can. Venat. ...	27 58 56.5	- 2.0	58 50.8	40 15 34.0	- 9.1
10	.....	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 3.4	.....	.....	.....	.....
11	May 3	29.59	40.1	49.7	Groom. 1923 .....	62 39 16.3	+ 37.5	39 50.0	5 34 34.8	+ 1.6
12	"	"	"	"	32 Comæ .....	356 5 46.2	- 39.3	5 3.5	72 9 21.3	-11.8
13	"	29.59	39.6	48.0	Groom. 1947 .....	47 46 39.5	+ 18.8	46 55.2	20 27 29.6	- 2.2
14	"	"	"	"	Radcliffe 2967 ...	64 52 41.7	+ 40.8	53 19.7	3 21 5.1	- 0.6
15	"	"	"	"	Groom. 1971 .....	46 17 51.0	+ 17.1	18 5.3	21 56 19.5	- 3.8
16	"	29.59	38.8	46.9	B.A.C. 4462 .....	343 49 38.7	- 61.0	48 34.0	84 25 50.8	-15.4
17	"	29.59	38.5	46.3	B.A.C. 4500 .....	320 17 14.7	-157.5	14 34.2	107 59 50.6	-18.8
18	"	"	"	"	B.A.C. 4555 .....	31 33 23.3	+ 1.6	33 22.2	36 41 2.6	- 8.3
19	"	29.60	39.1	45.3	84 Ursæ Majoris .	33 22 52.5	+ 3.5	22 53.2	34 51 31.6	- 8.8
20	May 5	29.98	46.1	50.9	B.A.C. 4020 .....	335 16 28.6	- 82.6	15 2.5	92 59 22.3	-14.1
21	"	"	"	"	$\epsilon$ Virginis .....	347 46 27.5	- 53.2	45 30.8	80 28 54.0	-11.5
22	"	29.98	44.1	50.0	B.A.C. 4130 (1st)	59 8 41.0	+ 32.8	9 9.5	9 5 15.3	+ 4.4
23	"	29.99	43.6	49.9	B.A.C. 4214 .....	315 22 57.2	- 21.1	22 33.1	112 51 51.7	-19.4
24	"	"	"	"	$\gamma$ Virginis (North)	337 35 17.9	- 76.4	33 57.7	90 40 27.1	-15.2
25	"	30.00	42.5	49.0	Groom. 1947 .....	47 46 39.2	+ 18.9	46 54.7	20 27 30.1	- 1.7
26	"	"	"	"	Groom. 1971 .....	46 17 52.2	+ 17.3	18 6.5	21 56 18.3	- 3.3
27	"	30.00	40.2	48.5	B.A.C. 4500 .....	320 17 16.1	-159.1	14 33.8	107 59 51.0	-18.9
28	"	"	"	"	Rümker 4459 ...	345 19 9.6	- 58.5	18 6.9	82 56 17.9	-15.9
29	"	30.00	41.5	47.9	$\tau$ Virginis .....	340 29 21.5	- 69.2	28 8.2	87 46 16.6	-16.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for April 27, +  $1''$ .4, for April 30, +  $1''$ .3, for May 1, +  $1''$ .3, for May 3, +  $1''$ .4, for May 5, +  $1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for April 27,  $30^{\circ} 0' 3''$ .7, for April 30,  $30^{\circ} 0' 3''$ .5, for May 1,  $30^{\circ} 0' 3''$ .4, for May 3,  $30^{\circ} 0' 3''$ .6, for May 5,  $30^{\circ} 0' 3''$ .9.

1. Faint. April 30. A cloudy night. 8, 9, 20, 21, 29. Cloudy. 9, 22. Nearest division.

22. Companion of the  $\gamma$  5 Mag. 23. Unsteady.

24. Companion of the same magnitude.

24, 29. Very unsteady. 27. Clouds passing.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	'	"		
1	May 6	30.24	42.3	52.1	B.A.C. 3992 .....	353 19 25.7	-44.3	18 37.2	74 55 47.6	-8.8
2	"	"	"	"	Radcliffe 2775 ...	66 0 58.5	+43.3	1 38.1	2 12 46.7	+7.1
3	"	"	"	"	10 Virginis .....	340 57 8.6	-68.6	55 56.7	87 18 28.1	-13.2
4	"	30.24	41.1	50.0	B.A.C. 4130 (2d)	59 8 51.5	+33.3	9 22.0	9 5 2.8	+4.6
5	"	"	"	"	20 Comæ .....	359 55 53.2	-34.5	55 15.0	68 19 9.8	-9.3
6	"	30.24	40.5	48.4	33 Comæ .....	356 7 54.6	-40.1	7 11.4	72 7 13.4	-11.5
7	"	30.24	41.2	48.0	B.A.C. 4392 .....	41 2 26.9	+11.6	2 35.3	27 11 49.5	-3.1
8	"	"	"	"	20 Can. Venat. ...	19 33 48.5	-11.0	33 34.7	48 40 50.1	-8.1
9	"	30.24	39.8	47.2	B.A.C. 4496 .....	338 10 15.7	-76.0	8 55.8	90 5 29.0	-16.4
10	"	"	"	"	84 Virginis .....	342 30 47.5	-65.2	29 38.6	85 44 46.2	-16.1
11	"	30.24	39.1	46.7	B.A.C. 4643 .....	61 41 35.5	+40.0	42 12.0	6 32 12.8	-4.6
12	May 7	30.24	45.8	52.3	B.A.C. 4009 .....	308 18 32.6	-385.1	12 4.5	120 2 20.3	-20.3
13	"	"	"	"	Radcliffe 2775 ...	66 0 58.8	+42.9	1 37.9	2 12 46.9	+7.2
14	"	30.24	45.5	51.4	$\alpha$ Corvi .....	314 21 45.0	-226.9	17 54.6	113 56 30.2	-19.4
15	"	"	"	"	Groom. 1860 .....	62 31 28.0	+37.7	32 2.1	5 42 22.7	+5.4
16	"	"	"	"	9 Comæ .....	7 11 48.3	-24.9	11 19.9	61 3 4.9	-6.6
17	"	"	"	"	Groom. 1892 .....	62 26 49.9	+37.7	27 24.1	5 47 0.7	+4.2
18	"	30.24	43.6	50.5	$\beta$ Corvi .....	315 40 58.3	-208.4	37 26.1	112 36 58.7	-19.5
19	"	"	"	"	$\gamma$ Virginis (North)	337 35 19.8	-77.0	33 58.8	90 40 26.0	-15.2
20	"	"	"	"	* R.A. 12 <sup>h</sup> 43 <sup>m</sup> 0 <sup>s</sup>	47 21 44.3	+18.6	21 59.4	20 52 25.4	-0.2
21	"	30.24	43.0	49.0	B.A.C. 4392 .....	41 2 26.7	+11.6	2 35.0	27 11 49.8	-2.9
22	"	"	"	"	59 Virginis .....	348 25 9.8	-52.7	24 13.1	79 50 11.7	-14.1
23	"	"	"	"	66 Virginis .....	333 50 25.7	-88.6	48 53.1	94 25 31.7	-17.0
24	"	30.24	41.7	48.2	(R) Hydræ .....	315 44 48.9	-20.8	44 23.9	112 30 0.9	-19.6
25	"	"	"	"	B.A.C. 4555 .....	31 33 23.6	+1.6	33 22.2	36 41 2.6	-7.2
26	"	"	"	"	Rümker 4459 ...	345 19 10.5	-59.0	18 7.1	82 56 17.7	-15.7
27	"	30.24	39.6	47.5	86 Ursæ Majoris .	32 39 58.2	+2.8	39 56.9	35 34 27.9	-8.5
28	May 8	30.11	44.4	52.1	Groom. 1850 .....	64 36 19.9	+40.7	36 56.9	3 37 27.9	+6.7
29	"	"	"	"	Groom. 1860 .....	62 31 27.7	+37.6	32 1.6	5 42 23.2	+5.6
30	"	"	"	"	Groom. 1879 .....	62 23 38.0	+37.5	24 12.5	5 50 12.3	+4.8
31	"	30.10	43.5	50.1	B.A.C. 4213 .....	325 39 50.2	-122.4	37 43.5	102 36 41.3	-17.5

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $g'$  = for May 6, +1''-6, for May 7, +1''-6, for May 8, +1''-7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for May 6,  $30^{\circ} 0' 4''$ .0, for May 7,  $30^{\circ} 0' 4''$ .1, for May 8,  $30^{\circ} 0' 4''$ .2.

3. Clouds passing. 8—11, 29, 30. Cloudy. 14. Unsteady. 18. Very unsteady.  
27. Very unsteady and ill defined.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N. P. D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o / "	"	/ "	o / "	"
1	May 8	30.10	43.5	50.1	$\chi$ Virginis .....	331 3 0.8	-97.8	1 19.8	97 13 5.0	-16.5
2	"	"	"	"	* R.A. $12^h 49^m 3^s$ .	47 16 46.1	+18.4	17 0.9	20 57 23.9	+1.8
3	"	30.09	43.4	48.9	54 Virginis (1st) ..	320 12 34.1	-159.1	9 51.7	108 4 33.1	-19.1
4	"	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 4.2	.....	.....	.....	.....
5	May 10	29.92	48.5	54.8	Groom. 1860 .....	62 31 30.5	+37.0	32 3.8	5 42 21.0	+6.0
6	"	"	"	"	Groom. 1871 .....	65 27 23.7	+41.4	28 1.7	2 46 23.1	+5.8
7	"	"	"	"	Groom. 1892 .....	62 26 51.6	+37.0	27 25.0	5 46 59.8	+4.8
8	"	29.92	47.1	53.3	$\chi$ Virginis .....	331 2 59.5	-96.5	1 19.7	97 13 5.1	-16.5
9	"	"	"	"	$\epsilon$ Ursæ Majoris ...	34 58 14.2	+5.1	58 16.1	33 16 8.7	-2.2
10	"	29.92	46.4	52.3	$\epsilon$ Virginis .....	349 58 29.2	-49.0	57 37.1	78 16 47.7	-12.9
11	"	"	"	"	Groom. 1971 .....	46 17 54.8	+17.1	18 8.6	21 56 16.2	-2.0
12	"	"	"	"	$\zeta^2$ Ursæ Majoris .	33 54 12.5	+4.0	54 12.2	34 20 12.6	-4.9
13	"	29.92	45.8	51.5	24 Can. Venat. ...	27 58 59.7	-2.1	58 53.2	40 15 31.6	-6.9
14	"	"	"	"	Rümker 4459 ...	345 19 10.9	-57.8	18 8.8	82 56 16.0	-15.4
15	"	29.92	44.9	50.2	B.A.C. 4689 .....	47 35 49.4	+18.6	36 4.1	20 38 20.7	-6.3
16	May 11	29.78	45.7	55.0	72 Ursæ Majoris .	34 11 7.7	+4.3	11 8.3	34 3 16.5	+0.2
17	"	29.78	46.9	54.1	$\kappa$ Draconis .....	48 48 27.7	+19.8	48 44.4	19 25 40.4	+2.4
18	"	"	"	"	Groom. 1923 .....	62 39 19.2	+37.2	39 52.2	5 34 32.6	+3.4
19	"	"	"	"	* R.A. $12^h 49^m 3^s$ .	47 16 44.4	+18.1	16 59.0	20 57 25.8	+2.3
20	"	29.77	44.5	53.5	B.A.C. 4393 .....	6 33 50.6	-25.3	33 22.3	61 41 2.5	-9.2
21	"	"	"	"	Groom. 2006 .....	66 38 19.9	+43.3	39 0.1	1 35 24.7	+0.6
22	"	29.77	45.9	52.0	B.A.C. 4527 .....	57 36 35.3	+30.4	37 2.1	10 37 22.7	-1.8
23	"	"	"	"	$\sigma$ Virginis .....	342 30 45.8	-63.4	29 38.6	85 44 46.2	-15.7
24	"	"	"	"	* R.A. $13^h 46^m 33^s$	44 55 9.5	+15.5	55 21.0	23 19 3.8	-5.4
25	"	29.76	45.1	51.1	Piazzi xiii. 291 ...	329 53 55.9	-100.9	52 12.0	98 22 12.8	-17.9
26	"	29.76	44.4	51.0	$\kappa^1$ Boötis .....	30 41 31.0	+0.7	41 28.1	37 32 56.7	-9.2
27	May 12	29.62	44.0	50.5	Spica .....	327 50 50.9	-109.5	48 57.7	100 25 27.1	-18.0
28	"	29.62	42.5	50.0	Rümker 4459 ...	345 19 10.3	-57.6	18 8.6	82 56 16.2	-15.2
29	"	29.62	42.0	49.5	$\tau$ Virginis .....	340 29 21.7	-68.2	28 9.4	87 46 15.4	-16.3
30	"	29.61	41.2	49.0	B.A.C. 4717 .....	335 37 15.7	-81.3	35 51.0	92 38 33.8	-17.2

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on 5' = for May 10, +1''.4, for May 11, +1''.3, for May 12, +1''.2.

Zenith Point = (App. S.Z.D. + Circle Reading) = for May 10,  $30^\circ 0' 4''$ .1, for May 11,  $30^\circ 0' 4''$ .0, for May 12,  $30^\circ 0' 3''$ .9.

2. Extremely faint. 13. Nearest division. 14, 15, 27—30. Cloudy. 20, 26. Unsteady.  
27. Scarcely visible.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.



No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Merid'an.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	"	o ' "	"
1	May 12	29.61	40.5	48.5	B.A.C. 4769 .....	344 43 19.5	-59.0	42 17.4	83 32 7.4	-16.2
2	May 15	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 3.8	.....	.....	.....	.....
3	May 18	29.81	49.0	55.2	38 Virginis .....	335 28 45.1	-81.0	27 19.9	92 47 4.9	-15.5
4	"	"	"	"	ε Virginis .....	349 58 29.9	-48.6	57 38.2	78 16 46.6	-12.1
5	"	29.82	48.5	54.5	α Comæ .....	356 31 50.0	-38.3	31 8.2	71 43 16.6	-10.7
6	"	"	"	"	B.A.C. 4462 .....	343 49 41.9	-60.3	48 37.6	84 25 47.2	-14.2
7	"	29.82	48.4	54.0	B.A.C. 4515 .....	336 39 47.1	-77.7	38 25.4	91 35 59.4	-16.1
8	"	"	"	"	B.A.C. 4577 .....	43 46 36.4	+14.2	46 47.1	24 27 37.7	-2.9
9	"	"	"	"	* R.A. 13 <sup>h</sup> 46 <sup>m</sup> 29 <sup>s</sup> .....	44 55 11.3	+15.5	55 22.9	23 19 1.9	-3.5
10	"	29.81	47.5	53.1	Oeltz. Arg. 14219. ....	49 53 50.3	+21.0	54 7.1	18 20 17.7	-3.8
11	"	"	"	"	B.A.C. 4723 .....	8 0 56.3	-23.4	0 29.2	60 13 55.6	-11.2
12	"	"	"	"	Radcliffe 3250 .....	66 17 14.5	+42.6	17 53.7	1 56 31.1	-5.0
13	"	29.80	47.4	52.2	R.H.C. 2206 .....	62 18 19.7	+36.7	18 53.3	5 55 31.5	-6.0
14	May 19	29.86	48.9	56.0	α <sup>2</sup> Can. Venat. ....	17 19 46.8	-13.0	19 29.7	50 54 55.1	-4.6
15	"	"	"	"	Radcliffe 2967 .....	64 52 45.5	+40.4	53 22.6	3 21 2.2	+3.0
16	"	29.86	48.5	54.6	Groom. 2006 .....	66 38 21.9	+43.1	39 1.9	1 35 22.9	+2.3
17	"	"	"	"	B.A.C. 4502 .....	337 37 54.5	-75.1	36 36.2	90 37 48.6	-15.8
18	"	29.86	48.2	53.9	82 Ursæ Majoris .	31 52 47.4	+1.9	52 46.0	36 21 38.8	-4.4
19	"	"	"	"	Oeltz. Arg. 14009. ....	57 49 3.3	+30.6	49 29.7	10 24 55.1	-1.2
20	"	29.86	47.5	53.0	Piazzi xiii. 291 .....	329 53 56.3	-100.8	52 11.2	98 22 13.6	-17.8
21	"	"	"	"	κ <sup>3</sup> Boötis .....	30 41 39.8	+0.7	41 36.9	37 32 47.9	-7.1
22	"	29.86	46.7	52.8	B.A.C. 4781 .....	312 5 45.8	-265.3	1 16.7	116 13 8.1	-20.0
23	"	"	"	"	γ Boötis .....	17 10 22.7	-13.3	10 5.5	51 4 19.3	-10.5
24	May 20	29.90	50.7	56.9	32 Cassiopeiæ S.P. ....	93 56 50.1	+117.7	58 44.4	25 44 19.6	+3.8
25	"	29.90	50.1	56.1	B.A.C. 4527 .....	57 36 38.0	+30.3	37 4.8	10 37 20.0	+0.4
26	"	29.90	50.0	55.9	84 Ursæ Majoris .	33 22 57.4	+3.4	22 57.7	34 51 27.1	-4.5
27	May 22	29.66	51.3	57.7	Groom. 1947 .....	47 46 43.9	+18.4	46 58.8	20 27 26.0	+2.1
28	"	29.66	50.7	56.4	54 Virginis (1st) .....	320 12 27.9	-154.5	9 50.2	108 4 34.6	-19.5

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$  8.

Correction for Runs on  $g'$  = for May 18,  $+1''$ .2, for May 19,  $+1''$ .3, for May 20,  $+1''$ .5, for May 22,  $+1''$ .8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for May 18,  $30^{\circ} 0' 3''$ .9, for May 19,  $30^{\circ} 0' 4''$ .0, for May 20,  $30^{\circ} 0' 4''$ .0, for May 22,  $30^{\circ} 0' 4''$ .1.

3, 10, 20. Nearest division.

3. Very unsteady.

17. Unsteady.

22. Very faint.

24-26. Cloudy.

28. Companion of the  $7\frac{1}{2}^{\text{th}}$  Mag.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$  8.

No. to Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1856, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	May 22	29.66	50.7	56.4	66 Virginis .....	333 50 24.1	-85.4	48 54.7	94 25 30.1	-16.5
2	"	"	"	"	* R.A. 13 <sup>h</sup> 28 <sup>m</sup> 41 <sup>s</sup>	59 3 28.4	+31.9	3 57.5	9 10 27.3	+0.7
3	"	29.65	50.1	55.1	B.A.C. 4577 .....	43 46 37.4	+14.1	46 48.0	24 27 36.8	-1.9
4	"	"	"	"	Lalande 25653 ...	10 58 18.0	-19.8	57 55.3	57 16 29.5	-8.8
5	"	.....	...	...	Wire(Nad.Obs.)R.	210 0 4.1	.....	.....	.....	.....
6	May 25	30.22	46.8	55.9	Piazzi xiii. 291 ...	329 53 54.1	-102.1	52 7.1	98 22 17.7	-17.6
7	"	"	"	"	B.A.C. 4700 .....	322 38 41.3	-140.4	36 17.4	105 38 7.4	-19.0
8	"	"	"	"	18 Boötis .....	351 54 42.6	-46.2	53 51.7	76 20 33.1	-13.3
9	"	30.23	46.3	54.1	θ Boötis .....	30 44 52.7	+0.8	44 48.9	37 29 35.9	-6.4
10	"	"	"	"	Radcliffe 3250 ...	66 17 16.2	+43.3	17 55.6	1 56 29.2	-3.1
11	"	30.23	45.7	53.0	γ N. L. ....	317 23 17.1	-186.4	57 5.1	110 17 19.7	.....
12	"	"	"	"	16 Libræ .....	334 29 41.6	-85.8	28 11.1	93 46 13.7	-16.7
13	"	30.23	44.9	52.7	20 Libræ .....	313 34 56.6	-240.2	30 51.8	114 43 33.0	-19.1
14	"	30.24	45.1	52.1	i Libræ .....	319 1 57.3	-169.8	59 3.5	109 15 21.3	-18.3
15	"	30.25	44.6	51.7	B.A.C. 5117 .....	313 40 33.4	-239.0	36 30.0	114 37 54.8	-17.7
16	May 27	29.96	49.0	56.0	ρ Herculis .....	23 32 54.8	-6.6	32 44.0	44 41 40.8	-12.5
17	"	29.97	48.4	55.8	ψ Ophiuchi .....	318 35 1.2	-171.5	32 4.7	109 42 20.1	-15.4
18	"	29.97	48.4	55.1	γ S. L. ....	310 26 47.0	-305.9	89 24.1	116 45 0.7	.....
19	"	29.96	48.0	54.7	* R.A. 16 <sup>h</sup> 45 <sup>m</sup> 49 <sup>s</sup>	312 43 58.6	-252.2	39 41.1	115 34 43.7	-13.5
20	"	"	"	"	(R) Ophiuchi .....	322 22 38.2	-140.6	20 13.3	105 54 11.5	-13.1
21	"	"	"	"	A <sup>1</sup> Ophiuchi .....	311 55 26.1	-269.5	50 51.7	116 23 33.1	-12.0
22	"	29.96	47.5	54.0	θ Ophiuchi .....	313 27 5.1	-239.1	23 1.5	114 51 23.3	-11.6
23	May 28	30.05	48.9	58.0	6 Ursæ Minoris...	50 47 30.4	+22.1	47 48.1	17 26 36.7	-4.8
24	"	"	"	"	47 Boötis .....	26 56 28.1	-3.1	56 20.3	41 18 4.5	-8.7
25	"	30.04	48.9	56.6	δ Boötis .....	12 5 26.3	-18.9	5 2.4	56 9 22.4	-11.2
26	"	30.04	48.1	54.9	R.H.C. 2424 .....	62 15 2.2	+36.8	15 33.9	5 58 50.9	-9.7
27	"	"	"	"	R.H.C. 2494 .....	66 40 40.1	+43.6	41 18.8	1 33 6.0	-11.3
28	"	30.03	46.6	53.6	R.H.C. 2517 .....	64 44 13.4	+40.6	44 48.7	3 29 36.1	-12.1
29	"	"	"	"	ε Herculis .....	13 51 33.5	-16.9	51 11.9	54 23 12.9	-14.4
30	"	"	"	"	θ Ophiuchi .....	313 27 3.5	-240.2	22 58.7	114 51 26.1	-11.6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on  $\zeta'$  = for May 25, +  $1'' .5$ , for May 27, +  $1'' .3$ , for May 28, +  $1'' .3$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for May 25,  $30^{\circ} 0' 4'' .6$ , for May 27,  $30^{\circ} 0' 5'' .0$ , for May 28,  $30^{\circ} 0' 5'' .1$ .

3, 14. Unsteady. 4, 13, 17, 21, 22. Very unsteady. 6. Nearest division. 10—15. Filmy.

11. Semi-diameter, -  $14' 52'' .8$ ; Parallax, +  $51' 50'' .8$ . 15. Scarcely visible.

16, 17, 19, 20. Cloudy. 18. Semi-diameter, +  $14' 45'' .8$ ; Parallax, +  $53' 1'' .7$ . Great undulation.

19. Extremely faint; Nearest division. 23. Cloudy; faint. 25. Thick clouds over the whole sky.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	May 29	.....	...	...	Wire(Nad.Obs.)R.	210 0 5.3	.....	.....	.....	.....
2	May 31	29.94	59.5	67.0	6 Ursæ Minoris...	50 47 34.2	+ 21.6	47 51.0	17 26 33.8	- 4.0
3	June 1	30.02	64.4	68.5	$\theta$ Boötis .....	30 44 55.9	+ 0.7	44 51.1	37 29 33.7	- 4.7
4	"	"	"	"	33 Boötis .....	23 15 40.3	- 6.7	15 28.3	44 58 56.5	- 6.8
5	"	30.02	63.5	68.1	B.A.C. 4881 .....	24 1 45.0	- 5.9	1 34.0	44 12 50.8	- 7.0
6	"	"	63.1	"	B.A.C. 4923 (2d) .....	317 30 48.4	-177.3	27 45.8	110 46 39.0	-19.1
7	"	"	"	"	B.A.C. 4962 .....	5 53 3.4	- 25.4	52 33.2	62 21 51.6	-10.8
8	"	30.02	62.5	67.4	$\iota^3$ Libræ .....	319 10 16.4	-161.4	7 29.6	109 6 55.2	-18.4
9	"	"	"	"	R.H.C. 2283 .....	62 48 20.7	+ 36.6	48 52.6	5 25 32.2	- 4.7
10	"	"	"	"	Groom. 2283 .....	65 59 56.3	+ 41.3	0 32.1	2 13 52.7	- 5.4
11	"	30.02	60.7	66.5	B.A.C. 5167 .....	309 29 19.8	-326.7	23 47.4	118 50 37.4	-18.2
12	June 5	29.98	56.9	66.3	B.A.C. 4845 .....	32 52 40.0	+ 2.9	52 37.8	35 21 47.0	- 4.3
13	"	29.98	56.7	65.9	6 Ursæ Minoris...	50 47 34.8	+ 21.7	47 51.4	17 26 33.4	- 2.6
14	"	.....	...	...	Wire(Nad.Obs.)R.	210 0 5.8	.....	.....	.....	.....
15	June 7	29.90	55.7	65.1	R.H.C. 2184 .....	66 17 19.8	+ 42.0	17 56.6	1 56 28.2	- 0.2
16	"	29.90	55.4	64.2	8 Libræ .....	322 52 11.2	-135.1	49 50.8	105 24 34.0	-18.3
17	"	29.90	55.1	63.9	18 Libræ .....	327 41 47.2	-108.7	39 53.1	100 34 31.7	-17.2
18	"	"	"	"	9 Ursæ Minoris...	50 33 16.0	+ 21.4	33 32.4	17 40 52.4	- 3.3
19	"	"	"	"	B.A.C. 5064 .....	28 58 11.8	- 1.0	58 5.8	39 16 19.0	- 6.6
20	"	29.88	53.9	61.8	$\delta$ Serpen. (South) .....	349 16 0.2	- 49.4	15 5.2	78 59 19.6	-13.0
21	"	"	"	"	R.H.C. 2380 .....	63 30 54.2	+ 38.1	31 26.7	4 42 58.1	- 5.6
22	"	29.88	53.0	60.5	$\phi$ Herculis .....	23 33 0.4	- 6.5	32 48.8	44 41 36.0	- 9.4
23	June 9	29.84	63.0	70.4	18 Libræ .....	327 41 45.7	-106.8	39 53.4	100 34 31.4	-17.2
24	"	"	"	"	$\psi$ Boötis .....	5 44 59.4	- 25.4	44 28.1	62 29 56.7	- 9.3
25	"	29.84	62.6	69.4	23 Libræ .....	313 31 45.3	-229.5	27 50.3	114 46 34.5	-19.4
26	"	"	"	"	R.H.C. 2288 .....	62 42 52.5	+ 36.1	43 23.4	5 31 1.4	- 2.8
27	"	29.84	61.9	68.8	Groom. 2283 .....	65 59 58.4	+ 41.0	0 33.5	2 13 51.3	- 3.4
28	"	"	"	"	$\zeta^1$ Coronæ .....	15 20 37.4	- 14.8	20 16.8	52 54 8.0	- 8.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $\zeta'$  = for May 31, +  $1''$ .2, for June 1, +  $1''$ .2, for June 5, +  $1''$ .3, for June 7, +  $1''$ .2, for June 9, +  $1''$ .2.

Zenith Point = (App. S.Z.D. + Circle Reading) = for May 31,  $30^{\circ} 0' 5''$ .4, for June 1,  $30^{\circ} 0' 5''$ .5, for June 5,  $30^{\circ} 0' 5''$ .8, for June 7,  $30^{\circ} 0' 5''$ .8, for June 9,  $30^{\circ} 0' 5''$ .9.

June 1. Filmy sky. 10, 16, 19, 25—28. Unsteady. 11. Very faint. 12, 21, 22. Cloudy. 13. Cloudy; very unsteady. 24. Filmy sky.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	June 9	29.84	61.1	68.0	$\delta$ Scorpii .....	312 59 17.2	-239.8	55 11.3	115 19 13.5	-17.8
2	"	"	"	"	$\alpha$ Herculis .....	21 47 45.7	- 8.2	47 32.3	46 26 52.5	- 8.5
3	"	"	"	"	$\theta$ Draconis .....	37 10 59.9	+ 7.1	11 1.3	31 3 23.5	- 7.3
4	"	29.84	59.7	67.0	$\sigma$ Coronæ .....	12 27 51.9	- 17.9	27 28.8	55 46 56.0	-10.1
5	June 10	29.93	63.9	69.9	Groom. 2213 .....	62 43 49.3	+ 36.2	44 20.5	5 30 4.3	- 2.1
6	"	"	"	"	$\mu$ Boötis .....	16 7 13.9	- 13.9	6 54.6	52 7 30.2	- 7.9
7	"	29.93	62.9	68.5	$\gamma$ Libræ .....	323 57 31.2	-126.4	55 19.5	104 19 5.3	-16.9
8	"	"	"	"	B.A.C. 5249 .....	41 16 32.4	+ 11.3	16 38.2	26 57 46.6	- 5.9
9	"	29.93	61.9	67.6	$\rho$ Coronæ .....	11 58 43.7	- 18.4	58 19.1	56 16 5.7	- 9.6
10	June 11	29.89	61.7	70.1	Groom. 2210 .....	64 45 47.9	+ 39.2	46 21.4	3 28 3.4	- 1.2
11	"	29.89	61.0	69.4	$\alpha$ Libræ .....	313 31 46.2	-230.7	27 50.0	114 46 34.8	-19.5
12	"	"	"	"	Radcliffe 3354 .....	62 48 23.8	+ 36.5	48 55.2	5 25 29.6	- 2.2
13	"	29.88	60.6	68.6	$\mu$ Boötis .....	16 7 14.8	- 14.0	6 55.4	52 7 29.4	- 7.7
14	"	"	"	"	B.A.C. 5117 .....	313 40 21.3	-228.3	36 27.2	114 37 57.6	-18.6
15	"	"	60.7	"	B.A.C. 5167 .....	309 29 20.2	-325.5	23 48.6	118 50 36.2	-18.8
16	"	29.88	60.6	67.8	$\beta$ Scorpii .....	313 28 55.5	-231.5	24 57.8	114 49 27.0	-17.6
17	"	"	"	"	$\rho$ Coronæ .....	11 58 44.2	- 18.4	58 19.6	56 16 5.2	- 9.3
18	"	29.88	60.4	67.1	$\epsilon^2$ Scorpii .....	310 45 48.6	-288.9	40 54.0	117 33 30.8	-16.9
19	"	"	"	"	B.A.C. 5453 .....	44 57 54.1	+ 15.2	58 4.1	23 16 20.7	- 6.9
20	"	29.88	58.5	66.0	$\alpha$ Herculis .....	343 24 17.4	- 60.1	23 11.2	84 51 13.6	-12.5
21	"	"	"	"	Oeltz. Arg. 16517 .....	33 48 36.5	+ 3.8	48 35.3	34 25 49.5	- 8.9
22	"	29.88	57.9	65.3	B.A.C. 5720 .....	324 55 52.8	-122.0	53 45.1	103 20 39.7	-12.9
23	"	"	"	"	$\epsilon$ Ursæ Minoris .....	60 29 39.1	+ 33.5	30 6.6	7 44 18.2	- 8.6
24	"	"	"	"	Groom. 2423 .....	39 34 25.3	+ 9.6	34 28.9	28 39 55.9	- 9.6
25	"	29.88	57.9	64.9	B.A.C. 5853 .....	28 5 4.2	- 1.9	4 56.4	40 9 28.4	-10.2
26	"	"	"	"	Radcliffe 3750 .....	67 31 49.3	+ 43.7	32 27.5	0 41 57.3	- 9.3
27	"	"	"	"	$\beta$ Draconis .....	30 38 48.5	+ 0.6	38 44.1	37 35 40.7	-10.6
28	"	"	"	"	$\epsilon$ Herculis .....	24 19 26.3	- 5.7	19 14.6	43 55 10.2	-10.9
29	"	29.88	58.0	64.5	$\mu$ Herculis .....	6 3 6.4	- 25.3	2 35.9	62 11 48.9	-11.2
30	June 12	29.84	59.1	69.1	$\rho$ Boötis .....	9 14 34.0	- 21.5	14 6.5	59 0 18.3	- 7.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on  $5''$  = for June 10, +  $1'' .2$ , for June 11, +  $1'' .2$ , for June 12, +  $1'' .2$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for June 10,  $30^{\circ} 0' 5'' .9$ , for June 11,  $30^{\circ} 0' 5'' .9$ , for June 12,  $30^{\circ} 0' 5'' .9$ .

2, 3, 9. Very unsteady. 4. Elongated in N.P.D. 5—9. Cloudy. 7, 8. Unsteady.  
9. Faint; Nearest division. 13. Faint. 14. Hardly visible. 16, 17. Nearest division.  
16—29. Very hazy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	June 12	29.84	59.1	69.1	$\pi^1$ Boötis .....	355 16 45.3	-39.3	16 0.5	72 58 24.3	-10.6
2		29.83	58.5	67.5	11 Libræ .....	336 33 14.2	-76.5	31 52.6	91 42 32.2	-15.1
3		"	58.5	"	B.A.C. 4920 .....	312 35 50.6	-248.4	31 36.5	115 42 48.3	-20.3
4		"	58.3	"	R.A. 14 <sup>h</sup> 55 <sup>m</sup> 11 <sup>s</sup> . ..	328 26 10.3	-104.5	24 20.2	99 50 4.6	-16.8
5		29.83	58.2	66.0	23 Libræ .....	313 31 49.6	-231.5	27 52.6	114 46 32.2	-19.5
6		"	"	"	Radcliffe 3354 ...	62 48 23.7	+36.6	48 55.2	5 25 29.6	-2.0
7		"	"	"	11 Ursæ Minoris ..	50 34 25.7	+21.3	34 41.0	17 39 43.8	-3.0
8		"	"	"	Groom. 2283 .....	65 59 58.6	+41.3	0 34.0	2 13 50.8	-2.6
9		29.84	57.6	65.0	R.H.C. 2333 .....	66 46 36.4	+42.5	47 13.4	1 27 11.4	-2.9
10		"	"	"	B.A.C. 5215 .....	309 58 34.2	-312.0	53 17.2	118 21 7.6	-18.5
11		29.83	57.5	64.1	$\pi$ Scorpii .....	312 36 15.2	-248.7	32 0.9	115 42 23.9	-17.5
12		29.83	57.0	64.0	B.A.C. 5346 .....	310 58 11.1	-285.2	53 20.8	117 21 4.0	-17.2
13		"	"	"	$\eta$ Ursæ Minoris ...	54 18 45.5	+25.8	19 6.3	13 55 18.5	-7.9
14		29.83	55.5	62.9	12 Ophiuchi .....	336 14 29.8	-77.8	13 6.0	92 1 18.8	-13.1
15		.....	...	...	Wire (Nad. Obs.) R.	210 0 5.9	.....	.....	.....	.....
16	June 14	29.83	65.4	72.2	R.A. 14 <sup>h</sup> 45 <sup>m</sup> 10 <sup>s</sup> . ..	326 28 12.4	-111.9	26 15.2	101 48 9.6	-17.4
17		"	"	"	B.A.C. 4937 .....	28 27 6.2	-1.5	26 59.1	39 47 25.7	-3.9
18		"	"	"	$\delta$ Boötis (1st) .....	26 26 57.5	-3.5	26 48.4	41 47 36.4	-4.5
19		29.82	63.6	71.5	$\beta$ Libræ .....	329 24 31.8	-99.3	22 46.3	98 51 38.5	-16.2
20		"	"	"	$\mu$ Boötis .....	16 7 17.2	-13.9	6 57.8	52 7 27.0	-7.0
21		"	"	"	B.A.C. 5116 .....	41 0 18.5	+11.0	0 23.5	27 14 1.3	-3.8
22		29.83	62.4	70.4	R.H.C. 2342 .....	62 34 58.3	+36.0	35 28.2	5 38 56.6	-2.9
23		"	61.6	"	2 Scorpii .....	313 24 8.6	-232.1	20 10.2	114 54 14.6	-17.8
24		29.83	61.1	69.3	B.A.C. 5318 .....	309 47 17.9	-315.4	41 57.0	118 32 27.8	-17.7
25		"	"	"	R.A. 16 <sup>h</sup> 6 <sup>m</sup> 33 <sup>s</sup> . ..	321 54 40.6	-139.4	52 15.0	106 22 9.8	-15.5
26		29.83	61.1	68.9	B.A.C. 5465 .....	311 29 45.9	-270.2	25 9.5	116 49 15.3	-16.2
27		29.84	60.9	68.7	12 Ophiuchi .....	336 14 30.2	-77.0	13 7.0	92 1 17.8	-12.9
28	June 15	29.86	72.0	75.7	Radcliffe 3354 ...	62 48 26.1	+35.7	48 56.7	5 25 28.1	-1.3
29		"	"	"	$\epsilon$ Draconis .....	37 42 12.2	+7.5	42 14.2	30 32 10.6	-3.8
30		"	71.2	"	B.A.C. 5167 .....	309 29 12.7	-318.4	23 48.0	118 50 36.8	-19.0
31		29.84	69.5	74.7	R.H.C. 2463 .....	64 37 21.2	+38.3	37 54.1	3 36 30.7	-5.3

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on  $5' =$  for June 14,  $+1'' .3$ , for June 15,  $+1'' .4$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for June 14,  $30^{\circ} 0' 6'' .1$ , for June 15,  $30^{\circ} 0' 6'' .1$ .

10. Hardly visible.

12. Faint.

23. Very unsteady.

24. Unsteady.

25. Without illumination.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected.*	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	June 15	29.84	69.5	74.7	Oeltz. Arg. 16517.	33 48 38.9	+ 3.7	48 37.5	34 25 47.3	- 7.7
2		29.83	67.9	74.0	W.B. xvi. 962	325 17 38.6	- 117.3	15 35.9	102 58 48.9	- 12.8
3		"	"	"	63 Hercules	2 39 40.4	- 28.8	39 5.4	65 35 19.4	- 10.0
4		29.83	66.9	73.0	e Hercules	15 41 7.8	- 14.3	40 47.7	52 33 37.1	- 9.5
5		"	"	"	Radcliffe 3750	67 31 50.6	+ 42.9	32 27.9	0 41 56.9	- 8.1
6		29.82	67.1	72.7	t Hercules	24 19 27.4	- 5.6	19 15.5	43 55 9.3	- 9.6
7	June 17	29.82	54.2	66.9	ψ Serpents	341 13 47.5	- 65.3	12 37.0	87 1 47.8	- 13.1
8		"	"	"	Radcliffe 3475	63 30 57.1	+ 37.9	31 29.0	4 42 55.8	- 3.0
9		29.83	54.1	64.6	φ Hercules	23 33 4.0	- 6.5	32 52.1	44 41 32.7	- 6.7
10		29.83	54.5	63.7	η Draconis	40 4 24.7	+ 10.2	4 28.4	28 9 56.4	- 5.8
11	June 18	29.97	56.1	67.0	R.H.C. 2333	66 46 39.3	+ 42.9	47 16.3	1 27 8.5	- 1.6
12		"	"	"	2 Hercules	21 47 48.0	- 8.3	47 34.1	46 26 50.7	- 6.2
13		29.96	55.4	64.4	B.A.C. 5346	310 58 15.0	- 287.4	53 22.2	117 21 2.6	- 17.5
14		"	54.6	"	B.A.C. 5465	311 29 52.9	- 275.1	25 11.4	116 49 13.4	- 16.4
15		"	"	"	B.A.C. 5560	39 21 32.1	+ 9.5	21 35.7	28 52 49.1	- 5.9
16		29.96	53.6	62.1	R.H.C. 2501	62 13 47.0	+ 36.3	14 18.0	6 0 6.8	- 5.4
17	June 19	.....	.....	.....	Wire (Nad. Obs.) R.	210 0 6.4	.....	.....	.....	.....
18	June 21	30.23	61.4	69.9	η Coronæ	9 2 56.6	- 21.9	2 29.1	59 11 55.7	- 6.8
19		30.23	61.0	68.0	ζ <sup>1</sup> Coronæ	15 20 39.5	- 15.0	20 18.3	52 54 6.5	- 6.0
20		30.23	61.7	67.6	39 Serpents	351 53 40.8	- 44.8	52 50.6	76 21 34.2	- 10.4
21		"	61.6	"	θ Draconis	37 11 4.2	+ 7.2	11 5.3	31 3 19.5	- 4.0
22	June 22	30.26	67.5	72.1	δ N. L.	314 34 51.4	- 213.8	68 50.8	113 5 33.2	.....
23		"	"	"	ζ <sup>3</sup> Coronæ	15 20 36.6	- 14.8	20 15.6	52 54 9.2	- 5.8
24		"	"	"	δ Scorpis	312 59 17.2	- 240.5	55 10.1	115 19 14.7	- 18.2
25		"	"	"	ρ Scorpis	309 31 53.1	- 324.9	26 22.3	118 48 2.5	- 18.5
26		30.27	65.6	70.9	δ Scorpis	316 4 37.2	- 194.3	1 16.4	112 13 8.4	- 17.2
27		"	"	"	49 Serpents (2d)	352 9 37.0	- 44.1	8 46.4	76 5 38.4	- 10.1
28		30.27	64.9	70.0	γ Hercules	357 44 20.5	- 35.9	43 38.0	70 30 46.8	- 9.2

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on 5' = for June 17, +  $1''.4$ , for June 18, +  $1''.5$ , for June 21, +  $1''.4$ , for June 22, +  $1''.4$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for June 17,  $30^{\circ} 0' 6''.3$ ; for June 18,  $30^{\circ} 0' 6''.4$ ; for June 21,  $30^{\circ} 0' 6''.4$ , for June 22,  $30^{\circ} 0' 6''.4$ .

June 17. Clouds passing. 7—10, 20, 21, 25, 26. Very unsteady. 9. Ill defined.

10. Cloudy after this observation. 19, 24. Unsteady. June 22. Night very hazy.

22. Semi-diameter, -  $14' 49''.5$ ; Parallax, +  $52' 29''.1$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	June 22	30.27	64.9	70.0	38 Herculis .....	343 24 18.4	-60.1	23 11.7	84 51 13.1	-11.0
2	"	"	"	"	R.H.C. 2501 .....	62 13 49.5	+35.9	14 20.1	} 6 0 5.3	-4.3
3	"	30.27	64.5	69.1	R.H.C. 2501 .....	62 13 48.3	+35.9	14 18.9		
4	"	"	64.4	"	31 Ophiuchi .....	312 52 1.1	-244.1	47 51.2		
5	June 23	30.18	65.3	71.9	B.A.C. 5163 .....	311 8 15.9	-279.6	3 30.9	117 10 53.9	-19.2
6	"	"	63.8	"	B.A.C. 5215 .....	309 58 35.3	-311.6	53 18.4	118 21 6.4	-19.0
7	"	"	63.4	"	$\rho$ Scorpii .....	309 31 54.0	-325.6	26 22.6	118 48 2.2	-18.6
8	"	30.17	64.1	70.9	$\delta$ Scorpii .....	316 4 38.5	-194.3	1 17.8	112 13 7.0	-17.2
9	"	30.17	63.9	70.0	$\eta$ N. L. ....	311 35 38.8	-269.5	69 7.3	116 5 17.5	.....
10	"	"	63.6	"	Antares .....	312 11 45.8	-256.5	7 23.5	116 7 1.3	-16.1
11	June 24	30.25	55.7	67.5	14 Herculis .....	22 26 33.6	-7.7	26 20.0	45 48 4.8	-5.0
12	"	"	"	"	B.A.C. 5453 .....	44 57 57.0	+15.5	58 7.0	23 16 17.8	-3.2
13	"	30.24	55.1	65.0	Antares .....	312 11 51.4	-261.7	7 23.9	116 7 0.9	-16.1
14	"	"	54.9	"	$\tau$ Scorpii .....	310 24 18.7	-305.6	19 6.6	117 55 18.2	-16.0
15	"	"	"	"	$\zeta$ Herculis .....	10 6 28.8	-21.0	6 1.9	58 8 22.9	-7.0
16	"	30.24	54.0	63.0	R.H.C. 2517 .....	64 44 21.9	+40.3	44 55.7	3 29 29.1	-4.0
17	"	"	53.6	"	$\eta$ S. L. ....	309 22 0.1	-338.6	84 7.5	117 50 17.3	.....
18	"	30.23	53.3	61.3	$\theta$ Ophiuchi .....	313 27 4.8	-238.4	23 0.6	114 51 24.2	-12.1
19	June 25	30.12	57.0	66.5	49 Libræ .....	322 9 53.3	-140.2	7 26.8	106 6 58.0	-15.9
20	"	30.11	56.6	66.0	B.A.C. 5346 .....	310 58 14.4	-288.0	53 20.9	117 21 3.9	-17.7
21	"	"	"	"	19 Ursæ Minoris ..	54 27 58.0	+26.2	28 18.7	13 46 6.1	-2.5
22	"	30.10	55.3	64.8	R.H.C. 2463 .....	64 37 19.2	+39.8	37 53.3	3 36 31.5	-2.7
23	"	"	54.9	"	B.A.C. 5595 .....	311 46 43.8	-269.7	42 8.2	116 32 16.6	-15.3
24	"	"	"	"	Oeltz. Arg. 16517 ..	33 48 41.1	+3.9	48 39.7	34 25 45.1	-4.7
25	"	30.10	54.8	63.2	W. B. xvi. 962 ..	325 17 42.0	-121.5	15 34.9	102 58 49.9	-12.4
26	"	"	"	"	B.A.C. 5815 .....	313 9 50.9	-241.9	5 42.7	115 8 42.1	-12.7
27	"	"	"	"	$\theta$ Ophiuchi .....	313 27 4.9	-236.7	23 2.4	114 51 22.4	-12.1
28	"	30.09	54.3	62.1	$d$ Ophiuchi .....	308 36 17.3	-364.3	30 7.0	119 44 17.8	-12.2
29	"	"	"	"	$f$ Draconis .....	46 27 36.1	+17.1	27 47.6	21 46 37.2	-5.8
30	"	30.08	53.7	61.4	4 Sagittarii .....	314 30 6.2	-219.8	26 20.1	113 48 4.7	-9.0

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on  $5' =$  for June 23, +  $1'' .4$ , for June 24, +  $1'' .3$ , for June 25, +  $1'' .3$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for June 23,  $30^{\circ} 0' 6'' .3$ , for June 24,  $30^{\circ} 0' 6'' .3$ , for June 25,  $30^{\circ} 0' 6'' .3$ .

5, 6. Very faint. 7, 8, 11, 12. Unsteady. 10, 13, 14, 18, 27, 28, 29, 30. Very unsteady.

9. Semi-diameter, -  $14' 46'' .0$ ; Parallax, +  $52' 50'' .1$ . June 24. Night very hazy.

16. Faint. 17. Semi-diameter, +  $14' 44'' .3$ ; Parallax, +  $53' 7'' .5$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	June 25	30.08	53.5	61.4	♃ S. L. ....	308 59 6.0	-350.3	121 4.9	118 13 19.9	.....
2	"	"	"	"	B.A.C. 6185 ....	32 29 4.8	+ 2.5	29 0.8	35 45 24.0	-6.9
3	"	54.0	"	"	♂ Sagittarii ....	308 27 31.9	-370.2	21 16.1	119 53 8.7	-7.2
4	"	30.08	53.7	60.9	♂ Sagittarii ....	312 48 49.1	-248.7	44 35.1	115 29 49.7	-6.5
5	June 26	.....	...	...	Wire (Nad. Obs.) R.	210 0 6.3	.....	.....	.....	.....
6	June 28	29.97	55.0	65.0	♄ Draconis ....	37 11 4.7	+ 7.2	11 6.4	31 3 18.4	-2.2
7	"	29.96	54.6	64.0	18 Scorpii ....	330 16 30.0	-98.2	14 46.4	97 59 38.4	-13.5
8	"	29.96	54.4	63.5	♄ Ophiuchi ....	318 35 0.2	-169.3	32 5.1	109 42 19.7	-15.4
9	"	"	"	"	♄ Herculis ....	0 3 2.3	-33.1	2 24.1	68 12 0.7	-7.6
10	"	29.96	54.6	62.7	B.A.C. 5560 ....	39 21 35.7	+ 9.5	21 39.8	28 52 45.0	-3.1
11	"	"	"	"	R.H.C. 2501 ....	62 13 49.7	+ 36.3	14 19.9	6 0 4.9	-2.7
12	"	29.96	53.6	61.9	26 Ophiuchi ....	313 32 6.4	-234.7	28 6.4	114 46 18.4	-13.9
13	"	"	53.4	"	η Ophiuchi ....	322 43 52.0	-136.7	41 30.4	105 32 54.4	-11.9
14	"	"	53.1	"	θ Ophiuchi ....	313 27 1.1	-236.3	22 59.5	114 51 25.3	-12.2
15	"	29.95	52.9	60.1	♌ Aurigæ..... S.P.	108 24 16.7	+273.6	28 44.3	40 14 19.5	+6.7
16	"	"	52.6	"	B.A.C. 1874 S.P.	91 13 5.3	+104.6	14 44.8	23 0 20.0	+6.0
17	"	29.95	52.4	59.7	γ <sup>3</sup> Sagittarii ....	307 55 34.8	-392.8	48 56.3	120 25 28.5	-8.8
18	June 29	30.07	54.5	64.0	49 Serpen. (North)	352 9 42.1	-44.8	8 51.7	76 5 33.1	-9.0
19	"	30.07	53.0	62.7	B.A.C. 5487 ....	309 22 1.2	-337.8	16 18.4	118 58 6.4	-16.9
20	"	"	52.8	"	τ Scorpii ....	310 24 14.4	-305.2	19 3.5	117 55 21.3	-16.3
21	"	"	52.2	"	B.A.C. 5607 ....	309 45 12.0	-324.9	39 41.6	118 34 43.2	-15.6
22	"	30.06	52.0	61.1	* R.A. 16 <sup>h</sup> 45 <sup>m</sup> 49 <sup>s</sup>	312 43 56.0	-251.0	39 39.2	115 34 45.6	-14.5
23	"	"	"	"	ε Herculis ....	13 51 42.7	-16.8	51 20.8	54 23 4.0	-5.6
24	"	30.06	53.6	60.1	B.A.C. 5813 ....	311 58 30.4	-265.8	53 59.9	116 20 24.9	-12.9
25	"	30.06	52.5	59.9	♄ Draconis ....	46 27 38.7	+17.1	27 50.9	21 46 33.9	-4.5
26	June 30	30.04	55.0	64.2	B.A.C. 5453 ....	44 57 57.8	+15.4	58 8.6	23 16 16.2	-1.6
27	"	30.03	54.5	62.2	38 Herculis ....	343 24 20.8	-60.9	23 14.4	84 51 10.4	-9.9
28	"	"	"	"	Oaltz. Arg. 16517.	33 48 41.1	+ 3.9	48 40.6	34 25 44.2	-3.3
29	"	30.02	53.4	61.1	♄ <sup>1</sup> Draconis ....	43 35 18.9	+14.0	35 27.7	24 38 57.1	-3.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on  $5' =$  for June 28,  $+1''.2$ , for June 29,  $+1''.2$ , for June 30,  $+1''.2$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for June 28,  $30^{\circ} 0' 5''.8$ , for June 29,  $30^{\circ} 0' 5''.5$ , for June 30,  $30^{\circ} 0' 5''.3$ .

1. Semi-diameter,  $+14' 44''.5$ ; Parallax,  $+53' 11''.2$ .

11, 22. Nearest division.

12—17. Unsteady.

18. Companion of the  $7^{\circ}$  Mag.

24. Clouds passing.

June 30. A cloudy night.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .



No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.	
			Ext.	Int.							
	1858.	In.	o	o		o	'	"	o	'	"
1	June 30	30.02	53.4	61.1	Groom. 2423 .....	39 34 31.0	+ 9.8	34 35.4	28 39 49.4	- 3.7	
2		30.02	53.0	60.7	$\delta$ Ophiuchi .....	314 15 37.9	-223.5	11 49.3	114 2 35.5	-11.8	
3	July 1	29.97	51.4	62.1	R.H.C. 2494 .....	66 40 51.5	+ 43.1	41 29.8	1 32 55.0	- 1.7	
4		29.97	51.1	61.1	* R.A. 16 <sup>h</sup> 45 <sup>m</sup> 49 <sup>s</sup> .....	312 43 56.7	-250.8	39 40.6	115 34 44.2	-15.0	
5	"	51.2	"	"	28 Ophiuchi .....	312 49 0.5	-249.3	44 46.0	115 29 38.8	-13.7	
6	"	"	"	"	63 Herculis .....	2 39 45.2	-29.9	39 10.2	65 35 14.6	-6.3	
7	"	"	"	"	B.A.C. 5853 .....	28 5 9.9	- 1.9	5 3.0	40 9 21.8	-4.1	
8		29.95	51.1	58.4	Radcliffe 3750 .....	67 31 52.7	+ 44.5	32 32.7	} 0 41 51.6	- 3.4	
9	"	"	"	"	Radcliffe 3750 .....	67 31 53.8	+ 44.5	32 33.8			
10		29.95	50.2	57.0	30 Draconis .....	29 3 23.8	- 1.0	3 18.6	39 11 6.2	-4.6	
11	July 3	30.13	49.0	58.0	27 Draconis .....	46 27 39.4	+ 17.3	27 52.7	21 46 32.1	- 3.3	
12		30.13	48.4	57.3	B.A.C. 6030 .....	357 33 15.1	-37.2	32 34.0	70 41 50.8	- 5.8	
13		.....	.....	.....	Wire (Nad.Obs.) R. ....	210 0 4.6	.....	.....	.....	.....	
14	July 10	.....	.....	.....	Wire (Nad.Obs.) R. ....	210 0 5.5	.....	.....	.....	.....	
15	July 13	29.87	58.6	65.8	$\beta$ Draconis .....	30 38 57.6	+ 0.6	38 53.3	37 35 31.5	- 0.8	
16		29.86	58.2	64.7	B.A.C. 6030 .....	357 33 16.9	-36.2	32 35.6	70 41 49.2	- 3.7	
17		29.86	58.0	64.1	5 Sagittarii .....	314 1 56.9	-223.5	58 7.9	114 16 16.9	-9.2	
18		29.86	57.4	63.6	12 Sagittarii .....	315 9 0.5	-207.0	5 27.2	113 8 57.6	- 7.9	
19	"	"	"	"	108 Herculis .....	8 2 29.9	-23.0	2 1.6	60 12 23.2	- 2.1	
20		29.85	56.6	62.9	25 Sagittarii .....	313 58 35.9	-225.0	54 45.9	114 19 38.9	-6.0	
21	July 14	29.80	62.0	67.9	31 Ophiuchi .....	312 51 59.7	-241.3	47 52.9	115 26 31.9	-14.0	
22	"	"	"	"	$\xi$ Ophiuchi .....	317 19 54.0	-178.3	16 49.6	110 57 35.2	-11.9	
23		29.80	61.8	67.3	73 Herculis .....	1 20 40.4	-30.8	20 3.7	66 54 21.1	- 3.6	
24	"	"	"	"	$\nu^1$ Draconis .....	33 31 22.7	+ 3.5	31 20.5	34 43 4.3	- 0.4	
25	"	"	"	"	84 Herculis .....	2 38 28.9	-29.2	37 54.6	65 36 30.2	- 3.1	
26		29.80	60.9	66.9	30 Draconis .....	29 3 29.2	- 0.9	3 23.2	39 11 1.6	- 0.7	
27	"	"	"	"	$\psi^2$ Draconis .....	50 15 11.8	+ 20.9	15 26.7	17 58 58.1	- 0.5	
28		29.80	59.8	66.1	B.A.C. 6185 .....	32 29 11.4	+ 2.5	29 7.6	35 45 17.2	- 0.8	

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''.8$ .

Correction for Runs on  $5'$  = for July 1, +  $1''.2$ , for July 3, +  $1''.1$ , for July 13 and 14, +  $1''.4$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 1,  $30^\circ 0' 5''.0$ , for July 3,  $30^\circ 0' 4''.6$ , for July 13,  $30^\circ 0' 6''.0$ , for July 14,  $30^\circ 0' 6''.1$ .

4. 5. Nearest division.

5. Observed for 31 Ophiuchi.

22. Another star prec. about  $40''$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''.8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	July 14	29.80	59.8	66.1	B.A.C. 6288 .....	49 40 56.0	+ 20.3	41 10.5	18 33 14.3	- 1.0
2		29.80	58.9	65.1	$\epsilon^2$ Lyrae (North). .....	17 42 41.6	- 12.3	42 24.0	50 32 0.8	- 1.1
3	July 17	29.95	58.4	69.1	B.A.C. 5858 .....	313 20 50.1	- 235.5	16 48.3	114 57 36.5	- 12.5
4		29.95	57.5	66.2	12 Sagittarii .....	315 9 0.6	- 207.7	5 26.0	113 8 58.8	- 7.9
5	"	"	"	"	108 Hercules .....	8 2 31.5	- 23.1	2 2.6	60 12 22.2	- 1.1
6	"	"	"	"	Radcliffe 3969 ...	65 38 4.2	+ 41.1	38 39.6	2 35 45.2	- 0.7
7		29.95	55.5	65.0	B.A.C. 6368 .....	33 21 21.4	+ 3.4	21 18.6	34 53 6.2	- 0.1
8		29.94	54.5	64.0	B.A.C. 6547 .....	6 39 25.3	- 24.8	38 53.7	61 35 31.1	+ 0.4
9	"	"	"	"	$f$ Aquilæ .....	332 35 20.1	- 89.7	33 43.9	95 40 40.9	- 0.4
10	"	"	"	"	B.A.C. 6652 .....	358 14 47.6	- 35.6	14 5.3	70 0 19.5	+ 0.4
11	"	"	"	"	B.A.C. 6712 .....	36 32 20.2	+ 6.6	32 20.9	31 42 3.9	- 0.5
12		29.94	53.6	63.0	$\epsilon^3$ Cygni .....	28 25 54.2	- 1.6	25 46.3	39 48 38.5	- 0.1
13		.....	...	...	Wire (Nad. Obs.) R. .....	210 0 6.6	.....	.....	.....	.....
14	July 19	29.98	57.4	68.3	$\nu^2$ Draconis .....	33 30 42.2	+ 3.5	30 39.3	34 43 45.5	+ 1.0
15	"	"	"	"	B.A.C. 5988 .....	2 50 8.1	- 29.4	49 32.1	65 24 52.7	- 2.0
16	"	"	"	"	87 Hercules .....	3 55 21.4	- 28.0	54 46.9	64 19 37.9	- 1.7
17		29.97	56.9	67.0	B.A.C. 6059 .....	311 34 21.8	- 272.1	29 42.9	116 44 41.9	- 10.1
18	"	"	"	"	$\gamma$ Draconis .....	29 44 57.3	- 0.2	44 50.5	38 29 34.3	+ 0.5
19	"	"	"	"	70 Ophiuchi (2d). .....	340 47 41.5	- 66.3	46 29.4	87 27 55.4	- 4.4
20		29.97	56.6	66.0	12 Sagittarii .....	315 9 2.9	- 208.2	5 27.8	113 8 57.0	- 8.0
21	"	"	"	"	41 Draconis .....	58 12 49.3	+ 30.7	13 14.2	10 1 10.6	+ 0.5
22	"	"	"	"	B.A.C. 6245 .....	356 0 37.1	- 38.6	59 52.1	72 14 32.7	- 1.6
23		29.97	56.5	65.1	B.A.C. 6292 .....	319 17 25.5	- 162.2	14 37.4	108 59 47.4	- 5.6
24	"	"	56.3	"	B.A.C. 6338 .....	312 46 16.0	- 247.3	42 2.5	115 32 22.3	- 5.9
25	"	"	56.0	"	B.A.C. 6374 .....	310 40 46.2	- 294.7	35 45.1	117 38 39.7	- 5.3
26	"	"	55.6	"	B.A.C. 6408 .....	310 59 44.4	- 286.7	54 51.0	117 19 33.8	- 5.0
27	"	"	"	"	$\theta^2$ Serpentis .....	342 16 47.8	- 63.1	15 38.6	85 58 46.2	- 1.3
28		29.96	55.0	64.1	B.A.C. 6505 .....	312 52 24.6	- 245.9	48 12.8	115 26 12.0	- 3.2
29	July 21	29.79	54.9	66.5	B.A.C. 5858 .....	313 20 51.1	- 235.8	16 49.1	114 57 35.7	- 12.6
30	"	"	"	"	Radcliffe 1474 S.P. .....	70 55 40.0	+ 49.5	56 23.2	2 41 58.4	+ 1.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''.8$ .

Correction for Runs on  $5'$  = for July 17, +  $1''.5$ , for July 19, +  $1''.5$ , for July 21, +  $1''.5$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 17,  $30^\circ 0' 6''.6$ , for July 19,  $30^\circ 0' 6''.6$ , for July 21,  $30^\circ 0' 6''.5$ .

2. Clouded over.      July 19. Stars unsteady.      24. Very faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''.8$ .

No. for Ref.	Day of Observ.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected.*	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	July 21	29.79	54.4	63.9	63 Ophiuchi .....	313 26 58.8	-234.3	22 58.6	114 51 26.2	-9.9
2	"	"	"	"	70 Ophiuchi (2d) .....	340 47 39.2	-66.2	46 27.3	87 27 57.5	-4.2
3	"	"	"	"	B.A.C. 6184 .....	34 28 36.2	+ 4.5	28 35.3	33 45 49.5	+ 1.3
4	"	29.79	53.5	62.6	108 Herculis .....	8 2 32.5	-23.1	2 3.7	60 12 21.1	-0.1
5	"	"	"	"	42 Draconis .....	43 42 49.5	+ 14.0	42 57.8	24 31 27.0	+ 1.2
6	"	29.79	52.6	61.9	B.A.C. 6369 .....	313 9 30.6	-240.4	5 23.6	115 9 1.2	-5.2
7	"	"	"	"	$\nu^1$ Sagittarii .....	315 22 56.1	-205.5	19 25.0	112 54 59.8	-4.0
8	"	29.79	52.4	61.0	B.A.C. 6505 .....	312 52 23.0	-245.8	48 11.4	115 26 13.4	-3.2
9	July 24	.....	...	...	Wire (Nad. Obs.) R.	210 0 6.4	.....	.....	.....	.....
10	July 26	29.85	54.6	64.9	$\nu^1$ Draconis .....	33 31 24.5	+ 3.5	31 22.0	34 43 2.8	+ 2.7
11	"	"	"	"	29 Draconis .....	52 32 55.2	+ 23.8	33 13.4	15 41 11.4	+ 3.0
12	"	29.85	54.2	63.2	Radcliffe 3798 ...	65 12 10.4	+ 40.4	12 45.0	3 1 39.8	+ 2.4
13	"	29.84	53.6	62.4	40 Draconis .....	58 12 38.7	+ 30.8	13 3.8	10 1 21.0	+ 2.5
14	"	"	53.6	"	$\chi$ Draconis .....	50 54 21.7	+ 21.9	54 37.0	17 19 47.8	+ 2.6
15	"	29.84	54.2	61.6	B.A.C. 6368 .....	33 21 24.7	+ 3.4	21 22.1	34 53 2.7	+ 2.7
16	"	29.84	54.0	61.3	$\theta^1$ Serpentis .....	342 16 53.9	-63.0	15 45.0	85 58 39.8	-0.3
17	"	"	"	"	B.A.C. 6547 .....	6 39 27.1	-24.8	38 55.7	61 35 29.1	+ 2.2
18	"	29.84	53.3	61.0	$\delta$ Draconis .....	45 38 59.2	+ 16.1	39 8.6	22 35 16.2	+ 2.4
19	"	"	"	"	$c^1$ Cygni .....	28 26 24.5	- 1.6	26 16.9	39 48 7.9	+ 2.9
20	"	29.84	52.6	60.1	11 Sagittæ .....	354 39 50.9	-40.7	39 3.8	73 35 21.0	+ 3.8
21	July 28	29.93	51.9	64.1	22 Camelop. S.P. ....	101 55 13.9	+175.0	58 2.6	33 43 37.8	-2.1
22	"	"	"	"	$f$ Draconis .....	46 27 46.6	+ 17.1	27 58.1	21 46 26.7	+ 3.6
23	"	"	"	"	Lalande 32461 ...	344 5 23.5	-59.7	4 17.5	84 10 7.3	-3.8
24	"	29.92	50.6	62.0	30 Draconis .....	29 3 33.3	- 1.0	3 26.9	39 10 57.9	+ 2.9
25	"	"	50.0	"	B.A.C. 6124 .....	329 56 13.4	-100.2	54 26.1	98 19 57.7	-5.2
26	"	"	"	"	B.A.C. 6184 .....	34 28 37.8	+ 4.5	28 36.9	33 45 47.9	+ 3.3
27	"	29.92	49.2	59.8	109 Herculis .....	359 57 34.6	-33.6	56 55.3	68 17 29.5	+ 0.6
28	"	"	49.4	"	1 Aquilæ .....	329 55 45.8	-100.5	53 59.1	98 20 25.7	-3.3
29	"	29.93	47.7	57.2	$\psi$ Sagittarii .....	312 48 49.1	-250.7	44 33.1	115 29 51.7	-2.2
30	"	29.93	47.7	56.9	$\delta$ Aquilæ .....	341 5 46.3	-66.7	4 33.4	87 9 51.4	+ 1.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for July 26, +  $1''$ .4, for July 28, +  $1''$ .4.

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 26,  $30^\circ 0' 6''$ .4, for July 28,  $30^\circ 0' 6''$ .4.

12—20, 27—30. Cloudy.

27, 28. Very unsteady.

12, 17. Faint.

July 28. (T) Hercules not visible.

15. Very faint.

18. Nearest division.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	July 29	29.97	52.5	63.4	$\beta$ Ophiuchi .....	342 53 17.6	-62.1	52 10.0	85 22 14.8	-4.0
2	"	"	"	"	87 Herculis .....	3 55 21.5	-28.2	54 47.0	64 19 37.8	+0.2
3	"	29.97	53.4	62.1	5 Sagittarii .....	314 2 2.7	-226.5	58 10.4	114 16 14.4	-9.5
4	"	"	"	"	100 Herculis (2d) .....	4 19 58.9	-27.7	19 24.8	63 55 0.0	+0.9
5	"	"	"	"	41 Draconis .....	58 12 50.4	+31.0	13 15.8	10 1 9.0	+3.3
6	"	29.97	51.4	60.9	Radcliffe 3921 ...	63 54 6.1	+38.9	54 38.3	4 19 46.5	+2.9
7	"	"	50.6	"	B.A.C. 6336 .....	316 46 56.8	-189.9	43 41.0	111 30 43.8	-5.4
8	"	"	50.4	"	B.A.C. 6374 .....	310 40 47.6	-208.2	35 43.2	117 38 41.6	-5.7
9	"	"	"	"	$\beta$ Lyre .....	11 26 53.1	-19.5	26 27.7	56 47 57.1	+2.8
10	"	29.97	49.7	59.0	B.A.C. 6490 .....	313 16 11.1	-241.3	12 3.7	115 2 21.1	-3.6
11	"	"	"	"	(R) Aquilæ .....	346 16 31.9	-55.5	15 30.4	81 58 54.4	+1.2
12	"	"	49.9	"	47 Camelop. S.P. .....	98 2 31.3	+143.0	4 48.6	29 50 23.8	+1.2
13	"	29.97	49.9	58.0	$\delta$ Aquilæ .....	341 5 45.4	-66.5	4 32.7	87 9 52.1	+2.9
14	"	"	"	"	$\beta^3$ Cygni .....	5 55 11.2	-25.9	54 39.0	62 19 45.8	+3.6
15	"	29.97	50.1	57.5	53 Sagittarii .....	314 33 22.6	-219.8	29 37.3	113 44 47.5	+0.6
16	July 30	30.00	59.2	64.2	B.A.C. 6030 .....	357 33 19.1	-36.2	32 37.4	70 41 47.4	-0.7
17	"	"	"	"	Radcliffe 3798 ...	65 12 10.2	+40.2	12 44.6	3 1 40.2	+3.3
18	"	"	"	"	$\gamma$ Draconis .....	29 44 59.8	-0.2	44 53.2	38 29 31.6	+3.4
19	"	30.00	57.6	63.5	B.A.C. 6132 .....	312 49 11.0	-245.9	44 58.5	115 29 26.3	-8.9
20	"	"	"	"	B.A.C. 6184 .....	34 28 36.6	+4.5	28 35.6	33 45 49.2	+3.8
21	"	"	"	"	Radcliffe 3921 ...	63 54 7.2	+38.5	54 39.1	4 19 45.7	+3.1
22	"	30.01	56.9	62.3	25 Sagittarii .....	313 58 34.1	-226.0	54 42.6	114 19 42.2	-6.3
23	"	"	56.9	"	B.A.C. 6374 .....	310 40 45.7	-204.5	35 45.0	117 38 39.8	-5.7
24	"	"	56.7	"	B.A.C. 6447 .....	321 44 6.0	-142.8	41 36.6	106 32 48.2	-2.9
25	"	30.01	56.9	61.9	R.H.C. 2859 .....	62 42 53.1	+36.8	43 24.3	5 31 0.5	+2.9
26	"	"	56.6	"	B.A.C. 6562 .....	312 10 20.9	-259.5	5 55.1	116 8 29.7	-2.6
27	"	"	"	"	$f$ Aquilæ .....	332 35 21.1	-89.6	33 45.2	95 40 39.6	+0.8
28	"	30.02	55.7	61.2	8 Vulpeculæ .....	2 43 46.8	-29.6	43 11.8	65 31 13.0	+3.7
29	"	"	55.6	"	B.A.C. 6727 .....	314 33 7.1	-217.8	29 23.7	113 45 1.1	+0.6
30	"	"	"	"	B.A.C. 6773 .....	316 59 24.1	-185.8	56 11.7	111 18 13.1	+1.7
31	July 31	.....	...	...	Wire(Nad.Obs.)R. .....	210 0 6.4	.....	...	.....	.....

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5'$  = for July 29,  $+1''$ .4, for July 30,  $+1''$ .3.

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 29,  $30^{\circ} 0' 6''$ .4, for July 30,  $30^{\circ} 0' 6''$ .4.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.
			Ext.	Int.	
	1858.	In.	o	o	
1	July 21	29.79	54.4	63.9	63 Ophiuchi
2	"	"	"	"	70 Ophiuchi
3	"	"	"	"	B.A.C. 6184
4	"	29.79	53.5	62.6	108 Hercules
5	"	"	"	"	42 Draconis
6	"	29.79	52.6	61.9	B.A.C. 6366
7	"	"	"	"	$\nu^1$ Sagittæ
8	"	29.79	52.4	61.0	B.A.C. 61
9	July 24	.....	.....	.....	Wire N
10	July 26	29.85	54.6	64.9	$\nu^1$ Dra
11	"	"	"	"	29 Dra
12	"	29.85	54.2	63.2	Radiat.
13	"	29.84	53.6	62.4	40 Dra
14	"	"	53.6	"	X Dra
15	"	29.84	54.2	61.6	B.A.C.
16	"	29.84	54.0	61.3	61.3
17	"	"	"	"	B
18	"	29.84	53.3	61.0	B
19	"	"	"	"	B
20	"	29.84	52.6	60.1	B
21	July 28	29.93	51.9	64.1	B
22	"	"	"	"	B
23	"	"	"	"	B
24	"	29.92	50.6	62.0	B
25	"	"	50.0	"	B
26	"	"	"	"	B
27	"	29.92	49.2	51.0	B
28	"	"	49.4	"	B
29	"	29.93	47.7	"	B
30	"	29.93	47.7	"	B

Increasing Circle Reading  
Assumed Colatitude =  
Correction for Run to  
Zenith Point = (Appl)

12—20, 27—30 (1)  
27, 28.

\* The  
To red

Geometric  
S.P.D.  
of  
Centre  
of  
Object.

353	35	45	11.2	-2.1
553	72	14	20.2	-1.1
470	114	12	37.4	-1.4
545	115	9	5.3	-5.5
57	307	117	16	54.1
0	91	46	14	15.7
15	316	81	58	53.2
19	279	89	54	56.0
37	181	65	37	6.7
26	193	39	48	5.5
35	44	55.9	38	29
44	57.6	115	29	27.2
28	38.8	33	45	46.0
38	5.2	5	36	19.6
14	37.1	108	59	47.7
38	37.3	51	35	47.5
0	10.5	46	14	14.3
21	56.4	117	52	28.4
37	19.2	65	37	5.6
16	52.8	39	48	32.0
24	20	81	54	7.3
13	26	1.8	105	48
25	35	6.0	115	39
22	54	41.3	17	19
43	37.6	111	30	47.2
14.8	41	25.0	52	33
8.2	0	9.9	46	14
51	58	37.1	43	15
37.2	24	57.5	70	49
24.8	54	1.8	65	20
6.7	32	26.2	31	41

with Polar Distances.

1.2 for Aug. 6, +1.2.

3.30 0 6"4 for Aug. 5, 30° 0' 6"4.

THE

Correction, and Refraction, for all  
are seen applied in addition.

has corrected from 68° 14' 24".8.

Date of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
		Ext.	Int.						
Aug. 6	In. 30.23	o 51.6	o 60.5	19 Cygni .....	16 36 24.9	-13.9	36 4.9	51 38 19.9	+6.6
Aug. 7	30.26	59.9	65.9	B.A.C. 6185 .....	32 29 17.6	+2.5	29 13.5	35 45 11.3	+5.7
	"	"	"	B.A.C. 6218 .....	19 7 45.4	-11.0	7 28.7	49 6 56.1	+4.8
	"	"	"	Radcliffe 3989 ...	66 28 23.7	+42.5	29 0.6	1 45 24.2	+4.9
	30.26	59.4	65.1	B.A.C. 6336 .....	316 46 52.2	-188.3	43 37.9	111 30 46.9	-5.5
	30.27	57.9	64.2	* R.A. 19 <sup>h</sup> 9 <sup>m</sup> 15 <sup>s</sup>	357 25 42.3	-36.8	24 59.3	70 49 25.5	+4.4
	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 6.4	.....	.....	.....	.....
Aug. 9	30.08	63.0	67.1	1 Aquilæ .....	329 55 43.2	-98.2	53 58.9	98 20 25.9	-2.6
	"	62.6	"	13 Lyncis ... S.P.	100 53 11.3	+162.2	55 48.0	32 41 23.2	+0.2
	"	"	"	$\beta^3$ Lyre .....	11 26 16.2	-19.1	25 51.1	56 48 33.7	+5.3
	30.07	61.9	66.1	B.A.C. 6490 .....	313 16 5.2	-236.1	12 3.1	115 2 21.7	-3.8
	"	61.5	"	B.A.C. 6562 .....	312 10 19.0	-257.4	5 55.4	116 8 29.4	-2.9
	30.07	61.1	65.6	$\chi^1$ Sagittarii .....	313 31 32.5	-232.1	27 34.5	114 46 50.3	-1.4
	"	"	"	$\epsilon^2$ Cygni .....	29 40 22.1	-0.3	40 15.6	38 34 9.2	+7.2
	"	"	"	B.A.C. 6750 .....	356 23 14.3	-37.9	22 30.9	71 51 53.9	+6.0
	30.07	59.9	64.8	R.H.C. 3000 .....	64 3 32.3	+38.6	4 5.5	4 10 19.3	+5.4
	"	59.6	"	B.A.C. 6911 .....	327 48 8.2	-107.9	46 14.8	100 28 10.0	+4.9
	30.07	59.3	64.0	$\alpha^2$ Capricorni ...	325 17 38.5	-120.3	15 32.6	102 58 52.2	+5.6
Aug. 19	29.66	63.0	69.3	$\mu^1$ Sagittarii .....	317 11 49.5	-178.5	8 45.6	111 5 39.2	-7.6
	"	"	"	$\eta$ S. L. ....	309 0 9.6	-338.1	62 33.7	118 11 51.1	.....
	29.66	62.7	68.9	42 Draconis .....	43 42 57.1	+13.7	43 5.8	24 31 19.0	+8.9
	"	62.3	"	$\phi$ Sagittarii .....	311 11 3.1	-275.3	6 22.2	117 8 2.6	-6.4
	29.66	61.9	67.6	$\lambda$ Aquilæ .....	333 10 24.2	-85.6	8 52.8	95 5 32.0	+1.1
	"	62.1	"	$\delta$ Sagittarii .....	319 5 2.5	-160.4	2 16.2	109 12 8.6	-1.2
	"	"	"	B.A.C. 6657 .....	2 54 39.0	-28.7	54 4.3	65 20 20.5	+7.8
	29.66	60.9	66.4	B.A.C. 6712 .....	36 32 29.4	+6.4	32 30.6	31 41 54.2	+10.1
	"	60.5	"	$\xi$ Aquilæ .....	346 21 19.5	-53.6	20 20.4	81 54 4.4	+7.2
	"	60.3	"	15 Sagittæ .....	354 56 35.3	-39.5	55 50.4	73 18 34.4	+8.8
	29.67	59.9	64.9	B.A.C. 7017 .....	44 38 17.2	+14.7	38 27.0	23 35 57.8	+10.3
	29.67	58.9	65.2	B.A.C. 7169 .....	59 11 0.8	+31.5	11 26.7	9 2 58.1	+9.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for Aug. 7,  $+1''$ .2, for Aug. 9,  $+1''$ .3, for Aug. 19,  $+1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 7,  $30^\circ 0' 6''$ .4, for Aug. 9,  $30^\circ 0' 6''$ .3, for Aug. 19,  $30^\circ 0' 5''$ .9.

5, 22—30. Very unsteady. 19. Unsteady.

Aug. 19. An unfavourable night; very hazy and cloudy.

20. Semi-diameter,  $+14' 47''$ .7; Parallax,  $+53' 20''$ .4. Both limbs rugged.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Baro- meter.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Aug. 20	29.85	54.9	64.4	B.A.C. 6347 .....	317 7 33.7	-183.5	4 25.2	111 9 59.6	-5.4
2		29.84	54.9	63.8	$\phi$ Sagittarii .....	311 11 9.1	-281.2	6 22.5	117 8 2.3	-6.5
3		"	54.7	"	$\sigma$ Sagittarii .....	311 50 44.3	-266.1	46 12.6	116 28 12.2	-5.3
4		"	"	"	$\gamma$ Lyrae .....	10 44 48.7	-20.0	44 22.8	57 30 2.0	+7.8
5		"	"	"	R.H.C. 2882 .....	64 45 27.2	+39.7	46 1.2	3 28 23.6	+8.4
6		29.84	54.0	61.7	$\delta$ S.L. ....	310 29 17.8	-299.8	92 19.6	116 42 5.2	.....
7		"	53.6	"	B.A.C. 6666 .....	311 2 54.3	-285.4	58 4.0	117 16 20.8	-1.9
8		29.84	53.6	60.9	$\lambda^3$ Sagittarii .....	313 6 56.5	-241.2	2 50.1	115 11 34.7	-0.5
9		29.84	53.3	59.9	R.H.C. 2990 .....	64 0 51.5	+38.7	1 24.7	4 13 0.1	+8.9
10		29.83	53.5	59.0	Rümker 8047 .....	346 17 38.4	-54.8	16 38.6	81 57 46.2	+8.4
11		"	"	"	B.A.C. 7017 .....	44 38 15.0	+15.0	38 25.2	23 35 59.6	+10.6
12		"	"	"	Groom. 3260 .....	62 19 17.6	+36.3	19 47.9	5 54 36.9	+9.1
13		29.83	53.0	58.1	Oeltz. Arg. 21012. ....	53 18 45.3	+24.8	19 3.9	14 55 20.9	+10.0
14		"	"	"	Oeltz. Arg. 21410. ....	52 27 20.5	+23.7	27 39.1	15 46 45.7	+10.0
15	Aug. 21	.....	.....	.....	Wire (Nad. Obs.) R. ....	210 0 5.8	.....	.....	.....	.....
16	Aug. 23	30.03	61.6	67.8	43 Camelop. S.P. ....	89 10 16.9	+94.9	11 46.1	20 57 21.3	+4.9
17		30.03	60.7	66.9	16 Lyrae .....	24 58 53.6	-5.0	58 42.4	43 15 42.4	+9.9
18		"	60.4	"	$\delta$ Sagittarii .....	319 5 4.7	-163.0	2 15.9	109 12 8.9	-1.2
19		"	60.0	"	B.A.C. 6666 .....	311 2 52.5	-283.4	58 4.3	117 16 20.5	-2.0
20		30.04	60.3	65.8	42 Aquilæ .....	333 18 21.4	-86.5	16 50.2	94 57 34.6	+3.9
21		"	"	"	15 Cygni .....	15 15 46.0	-15.0	15 25.5	52 58 59.3	+10.6
22		"	"	"	58 Aquilæ .....	338 10 9.9	-72.5	8 51.7	90 5 33.1	+6.3
23		30.04	58.9	64.9	B.A.C. 6896 .....	354 58 48.7	-40.0	58 2.5	73 16 22.3	+9.5
24		"	57.2	"	69 Aquilæ..... R. ....	265 5 28.3	+82.0	6 44.7	93 21 9.5	+8.6
25		"	"	"	74 Draconis ... R. ....	181 10 33.5	-31.6	9 56.3	9 24 21.1	+10.5
26		30.05	56.3	64.0	B.A.C. 7300 .....	312 40 57.9	-249.7	36 42.7	115 37 42.1	+8.8
27		"	"	"	$\epsilon$ Capricorni .....	320 50 59.8	-149.7	48 24.6	107 26 0.2	+11.7
28		"	"	"	$\beta$ Aquarii .....	332 4 36.5	-91.5	2 59.1	96 11 25.7	+13.4
29		30.04	55.2	62.3	$\gamma$ Capricorni .....	320 59 6.0	-148.9	56 31.0	107 17 53.8	+13.5
30		"	55.2	"	$\delta$ S.L. ....	322 10 49.7	-140.2	74 43.3	104 59 41.5	.....
31		"	54.0	"	50 Aquarii.....	324 2 5.8	-128.6	59 52.1	104 14 32.7	+17.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5' =$  for Aug. 20, +  $1''$ .6, for Aug. 23, +  $1''$ .7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 20,  $30^{\circ} 0' 5''$ .8, for Aug. 23,  $30^{\circ} 0' 5''$ .8.

1-4, 7, 8, 27, 28, 29, 31. Very unsteady.

6. Semi-diameter, +  $14' 50''$ .2; Parallax, +  $53' 17''$ .4. Great undulation. 10, 11, 18. Unsteady.

13, 17, 23. Nearest division. 24, 25. To deduce Geoc. N.P.D., for Reflexion Observations, add  $188^{\circ} 14' 24''$ .8 to corrected circle-reading.

26. Faint. 30. Semi-diameter, +  $15' 8''$ .5; Parallax, +  $51' 10''$ .8.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, for Direct observations, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Aug. 23	30° 03	54° 0	61° 1	$\sigma$ Aquarii .....	326 52 31° 2	-113° 3	50 33° 0	101 23 51° 8	+18° 2
2	Aug. 25	29° 99	51° 0	62° 1	$\chi^1$ Sagittarii .....	313 31 37° 8	-236° 3	27 36° 2	114 46 48° 6	-2° 0
3	"	"	"	"	$\lambda^1$ Sagittarii .....	313 16 55° 5	-240° 6	12 49° 7	115 1 35° 1	-0° 9
4	"	29° 98	50° 5	60° 0	B.A.C. 6746 .....	322 29 7° 6	-139° 2	26 42° 2	105 47 42° 6	+2° 1
5	"	"	"	"	R.H.C. 2990 .....	64 0 51° 6	+39° 2	1 25° 2	4 12 59° 6	+10° 3
6	"	29° 99	50° 1	58° 1	B.A.C. 6986 .....	18 10 35° 2	-12° 2	10 17° 3	50 4 7° 5	+12° 4
7	"	"	49° 9	"	B.A.C. 7070 .....	315 39 43° 1	-204° 3	36 12° 8	112 38 12° 0	+5° 7
8	"	"	"	"	Radcliffe 4926 ...	64 2 41° 1	+39° 3	3 15° 4	4 11 9° 4	+10° 6
9	"	30° 00	49° 4	57° 5	$\omega$ Capricorni .....	310 52 38° 9	-293° 9	47 40° 0	117 26 44° 8	+7° 1
10	"	"	49° 1	"	$\eta$ Capricorni .....	317 52 48° 9	-178° 4	49 45° 6	110 24 39° 2	+9° 5
11	"	30° 00	49° 6	56° 9	W.B. xxi. 246. ...	346 34 34° 3	-55° 0	33 33° 3	81 40 51° 5	+13° 6
12	Aug. 27	29° 80	54° 0	61° 8	$\alpha$ Aquilæ .....	338 20 46° 8	-72° 3	19 28° 9	89 54 55° 9	+3° 8
13	"	29° 79	52° 1	60° 1	$\gamma$ Cygni .....	11 38 58° 6	-19° 1	38 33° 2	56 35 51° 6	+11° 2
14	"	"	53° 1	"	$\rho$ Sagittarii .....	322 24 56° 7	-138° 0	22 32° 8	105 51 52° 0	+3° 5
15	"	29° 78	52° 6	59° 0	$\delta$ Draconis .....	54 19 15° 2	+25° 9	19 34° 9	13 54 49° 9	+12° 0
16	"	29° 78	51° 7	58° 8	Radcliffe 4881 ...	62 52 34° 0	+37° 1	53 6° 1	5 21 18° 7	+11° 3
17	"	29° 78	50° 7	58° 5	B.A.C. 7217 .....	57 9 40° 2	+29° 6	10 3° 8	11 4 21° 0	+12° 0
18	Aug. 28	29° 70	50° 0	61° 0	$\psi$ Sagittarii .....	312 48 43° 6	-247° 5	44 31° 4	115 29 53° 4	-3° 3
19	"	"	"	"	$\delta$ Aquilæ .....	349 54 4° 0	-48° 4	53 9° 3	78 21 15° 5	+6° 9
20	"	29° 69	49° 5	58° 7	B.A.C. 6712 .....	36 32 31° 4	+6° 6	32 32° 9	31 41 51° 9	+12° 4
21	"	"	"	"	R.H.C. 2990 .....	64 0 52° 6	+38° 9	1 25° 8	4 12 59° 0	+11° 1
22	"	29° 69	48° 7	57° 5	R.H.C. 3015 .....	64 51 46° 0	+40° 2	52 20° 8	3 22 4° 0	+11° 1
23	"	29° 69	48° 6	57° 0	$\delta^s$ Cygni .....	14 37 23° 6	-15° 9	37 2° 6	53 37 22° 2	+12° 8
24	"	.....	.....	.....	Wire (Nad. Obs.) R.	210° 0 6° 0	.....	.....	.....	.....
25	Aug. 30	29° 63	50° 2	60° 9	B.A.C. 6723 .....	29 10 44° 7	-0° 8	10 38° 2	39 3 46° 6	+12° 7
26	"	29° 63	50° 1	60° 1	$\gamma$ Aquilæ .....	348 31 42° 1	-50° 7	30 46° 0	79 43 38° 8	+8° 3
27	"	"	"	"	$\iota$ Sagittæ .....	354 39 56° 1	-40° 7	39 9° 4	73 35 15° 4	+10° 1
28	"	29° 63	50° 0	59° 0	B.A.C. 6923 .....	318 29 50° 1	-169° 8	26 54° 2	109 47 30° 6	+3° 9
29	"	"	"	"	B.A.C. 6986 .....	18 10 35° 1	-12° 0	10 17° 3	50 4 7° 5	+13° 6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on 5' = for Aug. 25, +  $1''$ .7, for Aug. 27, +  $1''$ .8, for Aug. 28, +  $1''$ .8, for Aug. 30, +  $1''$ .8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 25,  $30^\circ 0' 5''$ .9, for Aug. 27,  $30^\circ 0' 5''$ .9, for Aug. 28,  $30^\circ 0' 6''$ .0, for Aug. 30,  $30^\circ 0' 6''$ .0.

1-4, 9, 10, 20. Very unsteady.

5. Red?

7. Very faint.

Aug. 27. Cloudy.

13. Nearest division.

14. Scarcely visible.

18, 19. Unsteady.

22. Extremely faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.



No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Aug. 30	29.63	50.0	59.0	R.H.C. 3102 .....	62 58 10.6	+ 37.2	58 42.9	5 15 41.9	+12.3
2	"	"	49.7	"	(S) Capricorni ...	318 43 48.2	-167.7	40 55.9	109 33 28.9	+ 7.2
3	"	"	49.1	"	ω Capricorni .....	310 52 33.6	-290.5	47 38.0	117 26 46.8	+ 6.7
4	"	29.63	48.6	57.0	10 Aquarii .....	332 14 29.3	-91.0	12 52.1	96 1 32.7	+11.2
5	"	29.63	48.5	56.6	W.B. xxi. 249. ...	346 37 37.9	-54.3	36 38.5	81 37 46.3	+14.3
6	"	29.63	48.9	56.1	ε Capricorni .....	318 11 35.5	-173.2	8 36.9	110 5 47.9	+12.8
7	Sept. 1	29.64	52.2	60.9	B.A.C. 6563 .....	55 4 57.9	+ 26.8	5 18.7	13 9 6.1	+12.1
8	"	29.64	51.4	60.2	d Sagittarii .....	319 5 4.6	-163.9	2 14.7	109 12 10.1	-1.4
9	"	"	"	"	δ Aquilæ .....	341 5 47.9	-65.6	4 36.6	87 9 48.2	+ 5.3
10	"	"	50.7	"	α Vulpeculæ .....	2 37 59.2	-29.7	37 24.5	65 37 0.3	+10.0
11	"	"	"	"	θ Cygni .....	28 8 22.1	-1.9	8 15.3	40 6 9.5	+13.2
12	"	29.65	49.9	59.0	R.H.C. 2989 .....	64 1 12.3	+ 38.8	1 45.5	4 12 39.3	+12.2
13	"	"	"	"	R.H.C. 3015 .....	64 51 47.8	+ 40.0	52 22.4	3 22 2.4	+12.2
14	"	29.65	49.0	58.0	δ <sup>3</sup> Cygni .....	14 40 24.9	-15.8	40 3.2	53 34 21.6	+13.5
15	"	29.65	48.8	57.6	B.A.C. 7017 .....	44 38 19.6	+ 15.0	38 29.7	23 35 55.1	+14.2
16	"	"	"	"	Groom. 3260 .....	62 19 21.0	+ 36.4	19 51.2	5 54 33.6	+13.0
17	"	"	"	"	51 Cygni .....	28 4 41.3	-1.9	4 33.3	40 9 51.5	+15.1
18	"	29.66	49.1	56.9	1 Equulei (2d) ...	341 60 54.6	-63.8	59 45.1	86 14 39.7	+12.6
19	"	"	"	"	γ Equulei .....	347 43 55.6	-52.3	42 58.6	80 31 26.2	+14.1
20	"	"	"	"	W.B. xxi. 249. ...	346 37 38.9	-54.4	36 39.4	81 37 45.4	+14.5
21	"	29.67	48.2	56.0	β Aquarii .....	332 4 37.9	-91.8	3 0.0	96 11 24.8	+13.9
22	"	29.67	48.0	55.9	B.A.C. 7590 .....	354 47 50.0	-40.7	47 4.3	73 27 20.5	+16.6
23	Sept. 4	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.0	.....	.....	.....	.....
24	Sept. 6	29.65	53.6	60.9	μ Cephei .....	36 22 27.7	+ 6.4	22 28.9	31 51 55.9	+17.3
25	"	"	"	"	B.A.C. 7642 .....	31 30 25.0	+ 1.5	30 20.6	36 44 4.2	+17.7
26	Sept. 11	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.1	.....	.....	.....	.....
27	Sept. 13	29.98	60.7	68.0	γ Aquilæ .....	348 31 43.7	-50.2	30 48.0	79 43 36.8	+ 9.5
28	"	29.99	61.0	67.7	ω Sagittarii .....	311 38 37.0	-268.4	34 3.7	116 40 21.1	-0.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Sept. 1, +  $1''$ .7, for Sept. 6, +  $1''$ .6, for Sept. 13, +  $1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 1,  $30^{\circ} 0' 6''$ .0, for Sept. 6,  $30^{\circ} 0' 6''$ .0, for Sept. 13,  $30^{\circ} 0' 6''$ .0.

1. Faint. 3, 4, 10, 11, 17. Very unsteady. 7, 8, 9, 22. Unsteady.  
Sept. 13. The night very hazy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.  
To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observ.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	"	° ' "	"
1	Sep. 13	29.99	60.4	67.7	B.A.C. 6880 .....	322 28 21.7	-136.6	26 0.1	105 48 24.7	+3.9
2		29.98	58.9	66.3	$\lambda$ Ursæ Minoris .	67 7 6.4	+43.1	7 44.1	1 6 40.7	+15.2
3		"	58.6	"	$\rho$ Capricorni .....	319 60 23.7	-155.2	57 42.6	108 16 42.2	+5.7
4		"	"	"	$\nu$ Capricorni .....	319 39 7.0	-158.4	36 22.3	108 38 2.5	+6.8
5		"	"	"	B.A.C. 7217 .....	57 9 47.1	+29.3	10 10.3	11 4 14.5	+17.3
6		29.98	58.9	65.0	Oeltz. Arg. 21410	52 27 28.8	+23.6	27 47.1	15 46 37.7	+18.0
7		"	"	"	Lalande 41030 ...	16 12 29.1	-14.0	12 9.8	52 2 15.0	+18.6
8		"	57.5	"	33 Capricorni ...	316 50 34.1	-186.5	47 21.8	111 27 3.0	+10.6
9		"	57.1	"	B.A.C. 7485 .....	321 27 42.7	-144.5	25 13.0	106 49 11.8	+12.6
10		29.99	56.6	63.7	R.H.C. 3322 .....	63 54 45.6	+38.5	55 18.0	4 19 6.8	+17.1
11		"	"	"	B.A.C. 7676 .....	30 26 44.8	+0.4	26 39.7	37 47 45.1	+20.0
12		"	58.0	"	B.A.C. 7745 .....	312 26 3.3	-253.1	21 44.5	115 52 40.3	+15.0
13		29.99	57.8	63.0	* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 51 <sup>s</sup>	49 14 38.3	+20.0	14 52.2	18 59 32.6	+18.7
14	Sep. 15	30.04	58.0	65.9	B.A.C. 7083 .....	23 41 48.2	-6.3	41 36.7	44 32 48.1	+18.0
15		"	57.0	"	$\alpha$ Cygni .....	23 1 24.2	-7.0	1 11.8	45 13 13.0	+18.3
16		"	"	"	32 Vulpeculæ ...	5 46 23.8	-25.8	45 52.6	62 28 32.2	+17.3
17		30.03	56.5	64.0	$\tau$ Cygni .....	15 41 32.1	-14.7	41 12.1	52 33 12.7	+19.2
18	Sep. 17	29.53	62.6	67.6	$\delta$ S. L. ....	312 0 24.3	-255.7	64 6.3	115 10 18.5	.....
19		"	"	"	B.A.C. 6986 .....	354 58 50.9	-39.0	58 5.9	73 16 18.9	+12.6
20		29.52	63.1	67.1	4 Capricorni .....	315 63 0.6	-190.9	59 45.1	112 14 39.7	+3.3
21	Sep. 18	30.02	48.3	63.4	$\alpha$ Aquilæ .....	348 19 22.6	-51.9	18 25.0	79 55 59.8	+10.1
22		"	48.0	"	25 Cygni .....	14 54 25.0	-15.8	54 3.5	53 20 21.3	+16.1
23		"	"	"	Rümker 8047 ...	346 17 42.7	-55.7	16 42.4	81 57 42.4	+11.1
24		30.01	48.2	59.9	4 Capricorni .....	315 63 14.0	-200.0	59 49.6	112 14 35.2	+3.3
25		"	48.6	"	B.A.C. 7049 .....	315 26 31.1	-208.0	22 58.1	112 51 26.7	+4.3
26		"	47.6	"	$\delta$ S. L. ....	315 30 22.3	-207.5	94 32.0	111 39 52.8	.....
27		30.01	47.4	57.5	$\omega$ Capricorni .....	310 52 39.8	-295.2	47 40.0	117 26 44.8	+5.4
28		30.01	46.9	56.9	$\theta$ Capricorni .....	320 29 35.3	-155.2	26 54.5	107 47 30.3	+9.4
29		"	46.2	"	$\epsilon$ Capricorni .....	320 51 1.4	-153.0	48 23.2	107 26 1.6	+11.1
30		"	46.6	"	B.A.C. 7484 .....	61 53 29.0	+36.4	54 1.1	6 20 23.7	+19.0

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on 5' = for Sept. 15, +  $1'' .6$ , for Sept. 17, +  $1'' .6$ , for Sept. 18, +  $1'' .7$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 15,  $30^{\circ} 0' 5'' .8$ , for Sept. 17,  $30^{\circ} 0' 5'' .6$ , for Sept. 18,  $30^{\circ} 0' 5'' .5$ .

2. Past the centre wire.

8. Strikingly white; certainly not red.

10. Too faint to bear any illumination.

17. Very unsteady.

18. Semi-diameter, +  $14' 53'' .0$ ; Parallax, +  $53' 10'' .2$ .

19. Nearest division.

Sept. 18. The night very hazy.

21. Temperature of the instrument  $56^{\circ} .1$ .

26. Semi-diameter, +  $14' 59'' .0$ ; Parallax, +  $52' 43'' .6$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Aug. 30	29.63	50.0	59.0	R.H.C. 3102 .....	62 58 10.6	+ 37.2	58 42.9	5 15 41.9	+12.3
2	"	"	49.7	"	(S) Capricorni ...	318 43 48.2	-167.7	40 55.9	109 33 28.9	+7.2
3	"	"	49.1	"	ω Capricorni .....	310 52 33.6	-290.5	47 38.0	117 26 46.8	+6.7
4	"	29.63	48.6	57.0	10 Aquarii .....	332 14 29.3	-91.0	12 52.1	96 1 32.7	+11.2
5	"	29.63	48.5	56.6	W.B. xxi. 249. ...	346 37 37.9	-54.3	36 38.5	81 37 46.3	+14.3
6	"	29.63	48.9	56.1	ε Capricorni .....	318 11 35.5	-173.2	8 36.9	110 5 47.9	+12.8
7	Sept. 1	29.64	52.2	60.9	B.A.C. 6563 .....	55 4 57.9	+ 26.8	5 18.7	13 9 6.1	+12.1
8	"	29.64	51.4	60.2	d Sagittarii .....	319 5 4.6	-163.9	2 14.7	109 12 10.1	-1.4
9	"	"	"	"	δ Aquilæ .....	341 5 47.9	-65.6	4 36.6	87 9 48.2	+5.3
10	"	"	50.7	"	α Vulpeculæ .....	2 37 59.2	-29.7	37 24.5	65 37 0.3	+10.0
11	"	"	"	"	θ Cygni .....	28 8 22.1	- 1.9	8 15.3	40 6 9.5	+13.2
12	"	29.65	49.9	59.0	R.H.C. 2989 .....	64 1 12.3	+ 38.8	1 45.5	4 12 39.3	+12.2
13	"	"	"	"	R.H.C. 3015 .....	64 51 47.8	+ 40.0	52 22.4	3 22 2.4	+12.2
14	"	29.65	49.0	58.0	δ <sup>2</sup> Cygni .....	14 40 24.9	-15.8	40 3.2	53 34 21.6	+13.5
15	"	29.65	48.8	57.6	B.A.C. 7017 .....	44 38 19.6	+ 15.0	38 29.7	23 35 55.1	+14.2
16	"	"	"	"	Groom. 3260 .....	62 19 21.0	+ 36.4	19 51.2	5 54 33.6	+13.0
17	"	"	"	"	51 Cygni .....	28 4 41.3	- 1.9	4 33.3	40 9 51.5	+15.1
18	"	29.66	49.1	56.9	1 Equulei (2d) ...	341 60 54.6	-63.8	59 45.1	86 14 39.7	+12.6
19	"	"	"	"	γ Equulei .....	347 43 55.6	-52.3	42 58.6	80 31 26.2	+14.1
20	"	"	"	"	W.B. xxi. 249. ...	346 37 38.9	-54.4	36 39.4	81 37 45.4	+14.5
21	"	29.67	48.2	56.0	β Aquarii .....	332 4 37.9	-91.8	3 0.0	96 11 24.8	+13.9
22	"	29.67	48.0	55.9	B.A.C. 7590 .....	354 47 50.0	-40.7	47 4.3	73 27 20.5	+16.6
23	Sept. 4	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.0	.....	.....	.....	.....
24	Sept. 6	29.65	53.6	60.9	μ Cephei .....	36 22 27.7	+ 6.4	22 28.9	31 51 55.9	+17.3
25	"	"	"	"	B.A.C. 7642 .....	31 30 25.0	+ 1.5	30 20.6	36 44 4.2	+17.7
26	Sept. 11	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.1	.....	.....	.....	.....
27	Sept. 13	29.98	60.7	68.0	γ Aquilæ .....	348 31 43.7	-50.2	30 48.0	79 43 36.8	+9.5
28	"	29.99	61.0	67.7	ω Sagittarii .....	311 38 37.0	-268.4	34 3.7	116 40 21.1	-0.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5' =$  for Sept. 1, +  $1''$ .7, for Sept. 6, +  $1''$ .6, for Sept. 13, +  $1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 1,  $30^{\circ} 0' 6''$ .0, for Sept. 6,  $30^{\circ} 0' 6''$ .0, for Sept. 13,  $30^{\circ} 0' 6''$ .0.

1. Faint. 3, 4, 10, 11, 17. Very unsteady. 7, 8, 9, 22. Unsteady.  
Sept. 13. The night very hazy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.  
To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Sep. 13	29.99	60.4	67.7	B.A.C. 6880 .....	322 28 21.7	-136.6	26 0.1	105 48 24.7	+3.9
2	"	29.98	58.9	66.3	$\lambda$ Ursæ Minoris .	67 7 6.4	+43.1	7 44.1	1 6 40.7	+15.2
3	"	"	58.6	"	$\rho$ Capricorni .....	319 60 23.7	-155.2	57 42.6	108 16 42.2	+5.7
4	"	"	"	"	$\nu$ Capricorni .....	319 39 7.0	-158.4	36 22.3	108 38 2.5	+6.8
5	"	"	"	"	B.A.C. 7217 .....	57 9 47.1	+29.3	10 10.3	11 4 14.5	+17.3
6	"	29.98	58.9	65.0	Oeltz. Arg. 21410	52 27 28.8	+23.6	27 47.1	15 46 37.7	+18.0
7	"	"	"	"	Lalande 41030 ...	16 12 29.1	-14.0	12 9.8	52 2 15.0	+18.6
8	"	"	57.5	"	33 Capricorni ...	316 50 34.1	-186.5	47 21.8	111 27 3.0	+10.6
9	"	"	57.1	"	B.A.C. 7485 .....	321 27 42.7	-144.5	25 13.0	106 49 11.8	+12.6
10	"	29.99	56.6	63.7	R.H.C. 3322 .....	63 54 45.6	+38.5	55 18.0	4 19 6.8	+17.1
11	"	"	"	"	B.A.C. 7676 .....	30 26 44.8	+0.4	26 39.7	37 47 45.1	+20.0
12	"	"	58.0	"	B.A.C. 7745 .....	312 26 3.3	-253.1	21 44.5	115 52 40.3	+15.0
13	"	29.99	57.8	63.0	* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 51 <sup>s</sup>	49 14 38.3	+20.0	14 52.2	18 59 32.6	+18.7
14	Sep. 15	30.04	58.0	65.9	B.A.C. 7083 .....	23 41 48.2	-6.3	41 36.7	44 32 48.1	+18.0
15	"	"	57.0	"	$\alpha$ Cygni .....	23 1 24.2	-7.0	1 11.8	45 13 13.0	+18.3
16	"	"	"	"	32 Vulpeculæ ...	5 46 23.8	-25.8	45 52.6	62 28 32.2	+17.3
17	"	30.03	56.5	64.0	$\tau$ Cygni .....	15 41 32.1	-14.7	41 12.1	52 33 12.7	+19.2
18	Sep. 17	29.53	62.6	67.6	$\delta$ S. L. ....	312 0 24.3	-255.7	64 6.3	115 10 18.5	.....
19	"	"	"	"	B.A.C. 6986 .....	354 58 50.9	-39.0	58 5.9	73 16 18.9	+12.6
20	"	29.52	63.1	67.1	4 Capricorni .....	315 63 0.6	-190.9	59 45.1	112 14 39.7	+3.3
21	Sep. 18	30.02	48.3	63.4	$\epsilon$ Aquilæ .....	348 19 22.6	-51.9	18 25.0	79 55 59.8	+10.1
22	"	"	48.0	"	25 Cygni .....	14 54 25.0	-15.8	54 3.5	53 20 21.3	+16.1
23	"	"	"	"	Rümker 8047 ...	346 17 42.7	-55.7	16 42.4	81 57 42.4	+11.1
24	"	30.01	48.2	59.9	4 Capricorni .....	315 63 14.0	-200.0	59 49.6	112 14 35.2	+3.3
25	"	"	48.6	"	B.A.C. 7049 .....	315 26 31.1	-208.0	22 58.1	112 51 26.7	+4.3
26	"	"	47.6	"	$\delta$ S. L. ....	315 30 22.3	-207.5	94 32.0	111 39 52.8	.....
27	"	30.01	47.4	57.5	$\omega$ Capricorni .....	310 52 39.8	-295.2	47 40.0	117 26 44.8	+5.4
28	"	30.01	46.9	56.9	$\theta$ Capricorni .....	320 29 35.3	-155.2	26 54.5	107 47 30.3	+9.4
29	"	"	46.2	"	$\iota$ Capricorni .....	320 51 1.4	-153.0	48 23.2	107 26 1.6	+11.1
30	"	"	46.6	"	B.A.C. 7484 .....	61 53 29.0	+36.4	54 1.1	6 20 23.7	+19.0

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on 5' = for Sept. 15, +  $1''.6$ , for Sept. 17, +  $1''.6$ , for Sept. 18, +  $1''.7$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 15,  $30^{\circ} 0' 5''.8$ , for Sept. 17,  $30^{\circ} 0' 5''.6$ , for Sept. 18,  $30^{\circ} 0' 5''.5$ .

2. Past the centre wire.

8. Strikingly white; certainly not red.

10. Too faint to bear any illumination.

17. Very unsteady.

18. Semi-diameter, +  $14' 53''.0$ ; Parallax, +  $53' 10''.2$ .

19. Nearest division.

Sept. 18. The night very hazy.

21. Temperature of the instrument  $56^{\circ}.1$ .

26. Semi-diameter, +  $14' 59''.0$ ; Parallax, +  $52' 43''.6$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Red.	Day of Observation.	Baro- meter.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	June 30	30.02	53.4	61.1	Groom. 2423 .....	39 34 31.0	+ 9.8	34 35.4	28 39 49.4	- 3.7
2		30.02	53.0	60.7	$\delta$ Ophiuchi .....	314 15 37.9	-223.5	11 49.3	114 2 35.5	-11.8
3	July 1	29.97	51.4	62.1	R.H.C. 2494 .....	66 40 51.5	+ 43.1	41 29.8	1 32 55.0	- 1.7
4		29.97	51.1	61.1	* R.A. 16 <sup>h</sup> 45 <sup>m</sup> 49 <sup>s</sup> .....	312 43 56.7	-250.8	39 40.6	115 34 44.2	-15.0
5		"	51.2	"	28 Ophiuchi .....	312 49 0.5	-249.3	44 46.0	115 29 38.8	-13.7
6		"	"	"	63 Herculis .....	2 39 45.2	- 29.9	39 10.2	65 35 14.6	- 6.3
7		"	"	"	B.A.C. 5853 .....	28 5 9.9	- 1.9	5 3.0	40 9 21.8	- 4.1
8		29.95	51.1	58.4	Radcliffe 3750 ...	67 31 52.7	+ 44.5	32 32.7	} 0 41 51.6	- 3.4
9		"	"	"	Radcliffe 3750 ...	67 31 53.8	+ 44.5	32 33.8		
10		29.95	50.2	57.0	30 Draconis .....	29 3 23.8	- 1.0	3 18.6	39 11 6.2	- 4.6
11	July 3	30.13	49.0	58.0	27 Draconis .....	46 27 39.4	+ 17.3	27 52.7	21 46 32.1	- 3.3
12		30.13	48.4	57.3	B.A.C. 6030 .....	357 33 15.1	- 37.2	32 34.0	70 41 50.8	- 5.8
13		.....	...	...	Wire(Nad.Obs.)R.	210 0 4.6	.....	.....	.....	.....
14	July 10	.....	...	...	Wire(Nad.Obs.)R.	210 0 5.5	.....	.....	.....	.....
15	July 13	29.87	58.6	65.8	$\beta$ Draconis .....	30 38 57.6	+ 0.6	38 53.3	37 35 31.5	- 0.8
16		29.86	58.2	64.7	B.A.C. 6030 .....	357 33 16.9	- 36.2	32 35.6	70 41 49.2	- 3.7
17		29.86	58.0	64.1	5 Sagittarii .....	314 1 56.9	-223.5	58 7.9	114 16 16.9	- 9.2
18		29.86	57.4	63.6	12 Sagittarii .....	315 9 0.5	-207.0	5 27.2	113 8 57.6	- 7.9
19		"	"	"	108 Herculis .....	8 2 29.9	- 23.0	2 1.6	60 12 23.2	- 2.1
20		29.85	56.6	62.9	25 Sagittarii .....	313 58 35.9	-225.0	54 45.9	114 19 38.9	- 6.0
21	July 14	29.80	62.0	67.9	31 Ophiuchi .....	312 51 59.7	-241.3	47 52.9	115 26 31.9	-14.0
22		"	"	"	$\xi$ Ophiuchi .....	317 19 54.0	-178.3	16 49.6	110 57 35.2	-11.9
23		29.80	61.8	67.3	73 Herculis .....	1 20 40.4	- 30.8	20 3.7	66 54 21.1	- 3.6
24		"	"	"	$\nu^1$ Draconis .....	33 31 22.7	+ 3.5	31 20.5	34 43 4.3	- 0.4
25		"	"	"	84 Herculis .....	2 38 28.9	- 29.2	37 54.6	65 36 30.2	- 3.1
26		29.80	60.9	66.9	30 Draconis .....	29 3 29.2	- 0.9	3 23.2	39 11 1.6	- 0.7
27		"	"	"	$\psi^3$ Draconis .....	50 15 11.8	+ 20.9	15 26.7	17 58 58.1	- 0.5
28		29.80	59.8	66.1	B.A.C. 6185 .....	32 29 11.4	+ 2.5	29 7.6	35 45 17.2	- 0.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $\zeta'$  = for July 1, +  $1''$ .2, for July 3, +  $1''$ .1, for July 13 and 14, +  $1''$ .4.

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 1,  $30^\circ 0' 5''$ .0, for July 3,  $30^\circ 0' 4''$ .6, for July 13,  $30^\circ 0' 6''$ .0, for July 14,  $30^\circ 0' 6''$ .1.

4. 5. Nearest division.

5. Observed for 31 Ophiuchi.

22. Another star prec. about  $40''$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	July 14	29.80	59.8	66.1	B.A.C. 6288 .....	49 40 56.0	+ 20.3	41 10.5	18 33 14.3	- 1.0
2		29.80	58.9	65.1	ε <sup>2</sup> Lyre (North).	17 42 41.6	- 12.3	42 24.0	50 32 0.8	- 1.1
3	July 17	29.95	58.4	69.1	B.A.C. 5858 .....	313 20 50.1	- 235.5	16 48.3	114 57 36.5	- 12.5
4		29.95	57.5	66.2	12 Sagittarii .....	315 9 0.6	- 207.7	5 26.0	113 8 58.8	- 7.9
5	"	"	"	"	108 Hercules .....	8 2 31.5	- 23.1	2 2.6	60 12 22.2	- 1.1
6	"	"	"	"	Radcliffe 3969 ...	65 38 4.2	+ 41.1	38 39.6	2 35 45.2	- 0.7
7		29.95	55.5	65.0	B.A.C. 6368 .....	33 21 21.4	+ 3.4	21 18.6	34 53 6.2	- 0.1
8		29.94	54.5	64.0	B.A.C. 6547 .....	6 39 25.3	- 24.8	38 53.7	61 35 31.1	+ 0.4
9	"	"	"	"	f Aquilæ .....	332 35 20.1	- 89.7	33 43.9	95 40 40.9	- 0.4
10	"	"	"	"	B.A.C. 6652 .....	358 14 47.6	- 35.6	14 5.3	70 0 19.5	+ 0.4
11	"	"	"	"	B.A.C. 6712 .....	36 32 20.2	+ 6.6	32 20.9	31 42 3.9	- 0.5
12		29.94	53.6	63.0	c <sup>3</sup> Cygni .....	28 25 54.2	- 1.6	25 46.3	39 48 38.5	- 0.1
13		.....	...	...	Wire (Nad. Obs.) R.	210 0 6.6	.....	.....	.....	.....
14	July 19	29.98	57.4	68.3	ν <sup>2</sup> Draconis .....	33 30 42.2	+ 3.5	30 39.3	34 43 45.5	+ 1.0
15	"	"	"	"	B.A.C. 5988 .....	2 50 8.1	- 29.4	49 32.1	65 24 52.7	- 2.0
16	"	"	"	"	87 Hercules .....	3 55 21.4	- 28.0	54 46.9	64 19 37.9	- 1.7
17		29.97	56.9	67.0	B.A.C. 6059 .....	311 34 21.8	- 272.1	29 42.9	116 44 41.9	- 10.1
18	"	"	"	"	γ Draconis .....	29 44 57.3	- 0.2	44 50.5	38 29 34.3	+ 0.5
19	"	"	"	"	70 Ophiuchi (2d).	340 47 41.5	- 66.3	46 29.4	87 27 55.4	- 4.4
20		29.97	56.6	66.0	12 Sagittarii .....	315 9 2.9	- 208.2	5 27.8	113 8 57.0	- 8.0
21	"	"	"	"	41 Draconis .....	58 12 49.3	+ 30.7	13 14.2	10 1 10.6	+ 0.5
22	"	"	"	"	B.A.C. 6245 .....	356 0 37.1	- 38.6	59 52.1	72 14 32.7	- 1.6
23		29.97	56.5	65.1	B.A.C. 6292 .....	319 17 25.5	- 162.2	14 37.4	108 59 47.4	- 5.6
24	"	"	56.3	"	B.A.C. 6338 .....	312 46 16.0	- 247.3	42 2.5	115 32 22.3	- 5.9
25	"	"	56.0	"	B.A.C. 6374 .....	310 40 46.2	- 294.7	35 45.1	117 38 39.7	- 5.3
26	"	"	55.6	"	B.A.C. 6408 .....	310 59 44.4	- 286.7	54 51.0	117 19 33.8	- 5.0
27	"	"	"	"	θ <sup>2</sup> Serpentis .....	342 16 47.8	- 63.1	15 38.6	85 58 46.2	- 1.3
28		29.96	55.0	64.1	B.A.C. 6505 .....	312 52 24.6	- 245.9	48 12.8	115 26 12.0	- 3.2
29	July 21	29.79	54.9	66.5	B.A.C. 5858 .....	313 20 51.1	- 235.8	16 49.1	114 57 35.7	- 12.6
30	"	"	"	"	Radcliffe 1474 S.P.	70 55 40.0	+ 49.5	56 23.2	2 41 58.4	+ 1.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for July 17, +  $1''$ .5, for July 19, +  $1''$ .5, for July 21, +  $1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 17,  $30^{\circ} 0' 6''$ .6, for July 19,  $30^{\circ} 0' 6''$ .6, for July 21,  $30^{\circ} 0' 6''$ .5.

2. Clouded over.      July 19. Stars unsteady.      24. Very faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected.*	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	July 21	29.79	54.4	63.9	63 Ophiuchi .....	313 26 58.8	-234.3	22 58.6	114 51 26.2	-9.9
2	"	"	"	"	70 Ophiuchi (2d) .....	340 47 39.2	-66.2	46 27.3	87 27 57.5	-4.2
3	"	"	"	"	B.A.C. 6184 .....	34 28 36.2	+ 4.5	28 35.3	33 45 49.5	+ 1.3
4	"	29.79	53.5	62.6	108 Hercules .....	8 2 32.5	-23.1	2 3.7	60 12 21.1	-0.1
5	"	"	"	"	42 Draconis .....	43 42 49.5	+ 14.0	42 57.8	24 31 27.0	+ 1.2
6	"	29.79	52.6	61.9	B.A.C. 6369 .....	313 9 30.6	-240.4	5 23.6	115 9 1.2	-5.2
7	"	"	"	"	$\nu^1$ Sagittarii .....	315 22 56.1	-205.5	19 25.0	112 54 59.8	-4.0
8	"	29.79	52.4	61.0	B.A.C. 6505 .....	312 52 23.0	-245.8	48 11.4	115 26 13.4	-3.2
9	July 24	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.4	.....	.....	.....	.....
10	July 26	29.85	54.6	64.9	$\nu^1$ Draconis .....	33 31 24.5	+ 3.5	31 22.0	34 43 2.8	+ 2.7
11	"	"	"	"	29 Draconis .....	52 32 55.2	+ 23.8	33 13.4	15 41 11.4	+ 3.0
12	"	29.85	54.2	63.2	Radcliffe 3798 ...	65 12 10.4	+ 40.4	12 45.0	3 1 39.8	+ 2.4
13	"	29.84	53.6	62.4	40 Draconis .....	58 12 38.7	+ 30.8	13 3.8	10 1 21.0	+ 2.5
14	"	"	53.6	"	$\chi$ Draconis .....	50 54 21.7	+ 21.9	54 37.0	17 19 47.8	+ 2.6
15	"	29.84	54.2	61.6	B.A.C. 6368 .....	33 21 24.7	+ 3.4	21 22.1	34 53 2.7	+ 2.7
16	"	29.84	54.0	61.3	$\theta^1$ Serpentis .....	342 16 53.9	-63.0	15 45.0	85 58 39.8	-0.3
17	"	"	"	"	B.A.C. 6547 .....	6 39 27.1	-24.8	38 55.7	61 35 29.1	+ 2.2
18	"	29.84	53.3	61.0	$\delta$ Draconis .....	45 38 59.2	+ 16.1	39 8.6	22 35 16.2	+ 2.4
19	"	"	"	"	$c^1$ Cygni .....	28 26 24.5	- 1.6	26 16.9	39 48 7.9	+ 2.9
20	"	29.84	52.6	60.1	11 Sagittæ .....	354 39 50.9	-40.7	39 3.8	73 35 21.0	+ 3.8
21	July 28	29.93	51.9	64.1	22 Camelop. S.P.	101 55 13.9	+175.0	58 2.6	33 43 37.8	-2.1
22	"	"	"	"	$f$ Draconis .....	46 27 46.6	+ 17.1	27 58.1	21 46 26.7	+ 3.6
23	"	"	"	"	Lalande 32461 ...	344 5 23.5	-59.7	4 17.5	84 10 7.3	-3.8
24	"	29.92	50.6	62.0	30 Draconis .....	29 3 33.3	- 1.0	3 26.9	39 10 57.9	+ 2.9
25	"	"	50.0	"	B.A.C. 6124 .....	329 56 13.4	-100.2	54 26.1	98 19 57.7	-5.2
26	"	"	"	"	B.A.C. 6184 .....	34 28 37.8	+ 4.5	28 36.9	33 45 47.9	+ 3.3
27	"	29.92	49.2	59.8	109 Hercules .....	359 57 34.6	-33.6	56 55.3	68 17 29.5	+ 0.6
28	"	"	49.4	"	1 Aquilæ .....	329 55 45.8	-100.5	53 59.1	98 20 25.7	-3.3
29	"	29.93	47.7	57.2	$\psi$ Sagittarii .....	312 48 49.1	-250.7	44 33.1	115 29 51.7	-2.2
30	"	29.93	47.7	56.9	$\delta$ Aquilæ .....	341 5 46.3	-66.7	4 33.4	87 9 51.4	+ 1.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for July 26,  $+1''$ .4, for July 28,  $+1''$ .4.

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 26,  $30^\circ 0' 6''$ .4, for July 28,  $30^\circ 0' 6''$ .4.

12—20, 27—30. Cloudy.

12, 17. Faint.

15. Very faint.

18. Nearest division.

27, 28. Very unsteady.

July 28. (T) Hercules not visible.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	July 29	29.97	52.5	63.4	$\beta$ Ophiuchi .....	342 53 17.6	-62.1	52 10.0	85 22 14.8	-4.0
2	"	"	"	"	87 Herculis .....	3 55 21.5	-28.2	54 47.0	64 19 37.8	+0.2
3	"	29.97	53.4	62.1	5 Sagittarii .....	314 2 2.7	-226.5	58 10.4	114 16 14.4	-9.5
4	"	"	"	"	100 Herculis (2d) .....	4 19 58.9	-27.7	19 24.8	63 55 0.0	+0.9
5	"	"	"	"	41 Draconis .....	58 12 50.4	+31.0	13 15.8	10 1 9.0	+3.3
6	"	29.97	51.4	60.9	Radcliffe 3921 ...	63 54 6.1	+38.9	54 38.3	4 19 46.5	+2.9
7	"	"	50.6	"	B.A.C. 6336 .....	316 46 56.8	-189.9	43 41.0	111 30 43.8	-5.4
8	"	"	50.4	"	B.A.C. 6374 .....	310 40 47.6	-298.2	35 43.2	117 38 41.6	-5.7
9	"	"	"	"	$\beta$ Lyre .....	11 26 53.1	-19.5	26 27.7	56 47 57.1	+2.8
10	"	29.97	49.7	59.0	B.A.C. 6490 .....	313 16 11.1	-241.3	12 3.7	115 2 21.1	-3.6
11	"	"	"	"	(R) Aquilæ .....	346 16 31.9	-55.5	15 30.4	81 58 54.4	+1.2
12	"	"	49.9	"	47 Camelop. S.P. .....	98 2 31.3	+143.0	4 48.6	29 50 23.8	+1.2
13	"	29.97	49.9	58.0	$\delta$ Aquilæ .....	341 5 45.4	-66.5	4 32.7	87 9 52.1	+2.9
14	"	"	"	"	$\beta^3$ Cygni .....	5 55 11.2	-25.9	54 39.0	62 19 45.8	+3.6
15	"	29.97	50.1	57.5	53 Sagittarii .....	314 33 22.6	-219.8	29 37.3	113 44 47.5	+0.6
16	July 30	30.00	59.2	64.2	B.A.C. 6030 .....	357 33 19.1	-36.2	32 37.4	70 41 47.4	-0.7
17	"	"	"	"	Radcliffe 3798 ...	65 12 10.2	+40.2	12 44.6	3 1 40.2	+3.3
18	"	"	"	"	$\gamma$ Draconis .....	29 44 59.8	-0.2	44 53.2	38 29 31.6	+3.4
19	"	30.00	57.6	63.5	B.A.C. 6132 .....	312 49 11.0	-245.9	44 58.5	115 29 26.3	-8.9
20	"	"	"	"	B.A.C. 6184 .....	34 28 36.6	+4.5	28 35.6	33 45 49.2	+3.8
21	"	"	"	"	Radcliffe 3921 ...	63 54 7.2	+38.5	54 39.1	4 19 45.7	+3.1
22	"	30.01	56.9	62.3	25 Sagittarii .....	313 58 34.1	-226.0	54 42.6	114 19 42.2	-6.3
23	"	"	56.9	"	B.A.C. 6374 .....	310 40 45.7	-294.5	35 45.0	117 38 39.8	-5.7
24	"	"	56.7	"	B.A.C. 6447 .....	321 44 6.0	-142.8	41 36.6	106 32 48.2	-2.9
25	"	30.01	56.9	61.9	R.H.C. 2859 .....	62 42 53.1	+36.8	43 24.3	5 31 0.5	+2.9
26	"	"	56.6	"	B.A.C. 6562 .....	312 10 20.9	-259.5	5 55.1	116 8 29.7	-2.6
27	"	"	"	"	$f$ Aquilæ .....	332 35 21.1	-89.6	33 45.2	95 40 39.6	+0.8
28	"	30.02	55.7	61.2	8 Vulpeculæ .....	2 43 46.8	-29.6	43 11.8	65 31 13.0	+3.7
29	"	"	55.6	"	B.A.C. 6727 .....	314 33 7.1	-217.8	29 23.7	113 45 1.1	+0.6
30	"	"	"	"	B.A.C. 6773 .....	316 59 24.1	-185.8	56 11.7	111 18 13.1	+1.7
31	July 31	.....	...	...	Wire(Nad.Obs.)R. 210 0 6.4	.....	.....	...	.....	.....

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5'$  = for July 29,  $+1''$ .4, for July 30,  $+1''$ .3.

Zenith Point = (App. S.Z.D. + Circle Reading) = for July 29,  $30^{\circ} 0' 6''$ .4, for July 30,  $30^{\circ} 0' 6''$ .4.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.



No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Aug. 3	29.78	58.9	67.0	B.A.C. 6185 .....	32 29 17.4	+ 2.5	29 13.3	35 45 11.5	+ 4.7
2	"	"	"	"	B.A.C. 6245 .....	356 0 39.7	- 38.2	59 55.3	72 14 29.5	+ 1.1
3	"	29.78	57.4	66.0	B.A.C. 6304 .....	314 5 35.4	- 222.2	1 47.0	114 12 37.8	- 6.4
4	"	"	56.9	"	B.A.C. 6369 .....	313 9 29.2	- 238.2	5 24.5	115 9 0.3	- 5.5
5	"	"	56.6	"	B.A.C. 6396 .....	311 2 19.7	- 283.2	57 30.7	117 16 54.1	- 5.4
6	"	"	"	"	13 Lyrae .....	22 0 23.4	- 8.0	0 9.1	46 14 15.7	+ 4.8
7	"	29.79	55.8	64.2	(R) Aquilæ .....	346 16 32.1	- 54.5	15 31.6	81 58 53.2	+ 2.0
8	"	"	"	"	24 Aquilæ .....	338 20 46.1	- 72.0	19 27.9	89 54 56.9	+ 1.7
9	"	29.79	55.5	63.6	$\alpha$ Vulpeculæ .....	2 37 53.2	- 29.5	37 18.1	65 37 6.7	+ 4.6
10	"	"	"	"	$c^1$ Cygni .....	28 26 26.9	- 1.6	26 19.3	39 48 5.5	+ 5.5
11	Aug. 5	29.95	55.7	66.0	$\gamma$ Draconis .....	29 45 2.6	- 0.3	44 55.9	38 29 28.9	+ 4.7
12	"	"	55.0	"	B.A.C. 6132 .....	312 49 11.1	- 246.9	44 57.6	115 29 27.2	- 9.1
13	"	"	"	"	B.A.C. 6184 .....	34 28 39.9	+ 4.5	28 38.8	33 45 46.0	+ 5.3
14	"	29.95	54.5	64.2	Radcliffe 3900 ...	62 37 34.2	+ 36.8	38 5.2	5 36 19.6	+ 4.7
15	"	"	54.7	"	B.A.C. 6292 .....	319 17 25.6	- 162.7	14 37.1	108 59 47.7	- 5.5
16	"	29.95	54.6	63.3	* R. A. 18 <sup>h</sup> 32 <sup>m</sup> 6 <sup>s</sup> .....	16 38 57.6	- 13.7	38 37.3	51 35 47.5	+ 4.5
17	"	29.95	54.2	62.9	13 Lyrae .....	22 0 24.9	- 8.1	0 10.5	46 14 14.3	+ 5.3
18	"	"	53.9	"	$\tau$ Sagittarii .....	310 27 4.2	- 301.9	21 56.4	117 52 28.4	- 3.8
19	"	29.94	54.4	61.6	$\alpha$ Vulpeculæ .....	2 37 54.7	- 29.8	37 19.2	65 37 5.6	+ 5.0
20	"	"	"	"	$c^3$ Cygni .....	28 26 0.6	- 1.6	25 52.8	39 48 32.0	+ 6.1
21	"	"	"	"	$\xi$ Aquilæ .....	346 21 18.4	- 54.8	20 17.5	81 54 7.3	+ 5.2
22	"	29.94	53.9	61.0	B.A.C. 6880 .....	322 28 25.5	- 138.1	26 1.8	105 48 23.0	+ 3.8
23	Aug. 6	30.21	54.2	64.8	B.A.C. 6199 .....	312 39 25.0	- 252.5	35 6.0	115 39 18.8	- 8.2
24	"	"	"	"	$\psi$ Draconis .....	50 54 25.6	+ 22.2	54 41.3	17 19 43.5	+ 5.6
25	"	30.22	53.6	63.0	B.A.C. 6336 .....	316 46 53.8	- 190.3	43 37.6	111 30 47.2	- 5.5
26	"	"	"	"	$\zeta^3$ Lyrae .....	15 41 43.8	- 14.8	41 23.0	52 33 1.8	+ 4.9
27	"	"	"	"	13 Lyrae .....	22 0 24.4	- 8.2	0 9.9	46 14 14.9	+ 5.7
28	"	30.23	53.3	61.3	16 Lyrae .....	24 58 48.9	- 5.1	58 37.1	43 15 47.7	+ 5.8
29	"	"	"	"	* R. A. 19 <sup>h</sup> 9 <sup>m</sup> 15 <sup>s</sup> .....	357 25 40.9	- 37.2	24 57.5	70 49 27.3	+ 4.2
30	"	"	"	"	B.A.C. 6657 .....	2 54 38.1	- 29.8	54 1.8	65 20 23.0	+ 5.2
31	"	30.23	51.6	60.5	B.A.C. 6712 .....	36 32 25.3	+ 6.7	32 26.2	31 41 58.6	+ 6.2

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''.8$ .

Correction for Runs on  $5'$  = for Aug. 3,  $+1''.3$ , for Aug. 5,  $+1''.2$ , for Aug. 6,  $+1''.2$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 3,  $30^\circ 0' 6''.4$ , for Aug. 5,  $30^\circ 0' 6''.4$ , for Aug. 6,  $30^\circ 0' 6''.4$ .

4, 18, 26, 27, 29. Unsteady.

16, 28. Nearest division.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''.8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Aug. 6	30°23	51°6	60°5	19 Cygni .....	16 36 24.9	-13.9	36 4.9	51 38 19.9	+6.6
2	Aug. 7	30°26	59°9	65°9	B.A.C. 6185 .....	32 29 17.6	+2.5	29 13.5	35 45 11.3	+5.7
3	"	"	"	"	B.A.C. 6218 .....	19 7 45.4	-11.0	7 28.7	49 6 56.1	+4.8
4	"	"	"	"	Radcliffe 3989 ...	66 28 23.7	+42.5	29 0.6	1 45 24.2	+4.9
5	"	30°26	59°4	65°1	B.A.C. 6336 .....	316 46 52.2	-188.3	43 37.9	111 30 46.9	-5.5
6	"	30°27	57°9	64°2	* R.A. 19 <sup>h</sup> 9 <sup>m</sup> 15 <sup>s</sup>	357 25 42.3	-36.8	24 59.3	70 49 25.5	+4.4
7	"	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.4	.....	.....	.....	.....
8	Aug. 9	30°08	63°0	67°1	1 Aquilæ .....	329 55 43.2	-98.2	53 58.9	98 20 25.9	-2.6
9	"	"	62°6	"	13 Lyncis ... S.P.	100 53 11.3	+162.2	55 48.0	32 41 23.2	+0.2
10	"	"	"	"	$\beta^2$ Lyrae .....	11 26 16.2	-19.1	25 51.1	56 48 33.7	+5.3
11	"	30°07	61°9	66°1	B.A.C. 6490 .....	313 16 5.2	-236.1	12 3.1	115 2 21.7	-3.8
12	"	"	61°5	"	B.A.C. 6562 .....	312 10 19.0	-257.4	5 55.4	116 8 29.4	-2.9
13	"	30°07	61°1	65°6	$\chi^1$ Sagittarii .....	313 31 32.5	-232.1	27 34.5	114 46 50.3	-1.4
14	"	"	"	"	$\epsilon^3$ Cygni .....	29 40 22.1	-0.3	40 15.6	38 34 9.2	+7.2
15	"	"	"	"	B.A.C. 6750 .....	356 23 14.3	-37.9	22 30.9	71 51 53.9	+6.0
16	"	30°07	59°9	64°8	R.H.C. 3000 .....	64 3 32.3	+38.6	4 5.5	4 10 19.3	+5.4
17	"	"	59°6	"	B.A.C. 6911 .....	327 48 8.2	-107.9	46 14.8	100 28 10.0	+4.9
18	"	30°07	59°3	64°0	$\alpha^2$ Capricorni ...	325 17 38.5	-120.3	15 32.6	102 58 52.2	+5.6
19	Aug. 19	29°66	63°0	69°3	$\mu^1$ Sagittarii .....	317 11 49.5	-178.5	8 45.6	111 5 39.2	-7.6
20	"	"	"	"	$\eta$ S. L. ....	309 0 9.6	-338.1	62 33.7	118 11 51.1	.....
21	"	29°66	62°7	68°9	42 Draconis .....	43 42 57.1	+13.7	43 5.8	24 31 19.0	+8.9
22	"	"	62°3	"	$\phi$ Sagittarii .....	311 11 3.1	-275.3	6 22.2	117 8 2.6	-6.4
23	"	29°66	61°9	67°6	$\lambda$ Aquilæ .....	333 10 24.2	-85.6	8 52.8	95 5 32.0	+1.1
24	"	"	62°1	"	$\delta$ Sagittarii .....	319 5 2.5	-160.4	2 16.2	109 12 8.6	-1.2
25	"	"	"	"	B.A.C. 6657 .....	2 54 39.0	-28.7	54 4.3	65 20 20.5	+7.8
26	"	29°66	60°9	66°4	B.A.C. 6712 .....	36 32 29.4	+6.4	32 30.6	31 41 54.2	+10.1
27	"	"	60°5	"	$\xi$ Aquilæ .....	346 21 19.5	-53.6	20 20.4	81 54 4.4	+7.2
28	"	"	60°3	"	15 Sagittæ .....	354 56 35.3	-39.5	55 50.4	73 18 34.4	+8.8
29	"	29°67	59°9	64°9	B.A.C. 7017 .....	44 38 17.2	+14.7	38 27.0	23 35 57.8	+10.3
30	"	29°67	58°9	65°2	B.A.C. 7169 .....	59 11 0.8	+31.5	11 26.7	9 2 58.1	+9.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $g'$  = for Aug. 7, +1''2, for Aug. 9, +1''3, for Aug. 19, +1''5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 7,  $30^\circ 0' 6''$ .4, for Aug. 9,  $30^\circ 0' 6''$ .3, for Aug. 19,  $30^\circ 0' 5''$ .9.

5, 22—30. Very unsteady. 19. Unsteady.

Aug. 19. An unfavourable night; very hazy and cloudy.

20. Semi-diameter, +14' 47''7; Parallax, +53' 20''4. Both limbs rugged.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	"	"	o	"
1	Aug. 20	29.85	54.9	64.4	B.A.C. 6347 .....	317 7 33.7	-183.5	4 25.2	111 9 59.6	-5.4
2		29.84	54.9	63.8	$\phi$ Sagittarii .....	311 11 9.1	-281.2	6 22.5	117 8 2.3	-6.5
3		"	54.7	"	$\sigma$ Sagittarii .....	311 50 44.3	-266.1	46 12.6	116 28 12.2	-5.3
4		"	"	"	$\gamma$ Lyre .....	10 44 48.7	-20.0	44 22.8	57 30 2.0	+7.8
5		"	"	"	R.H.C. 2882 .....	64 45 27.2	+39.7	46 1.2	3 28 23.6	+8.4
6		29.84	54.0	61.7	$\delta$ S.L. ....	310 29 17.8	-299.8	92 19.6	116 42 5.2	.....
7		"	53.6	"	B.A.C. 6666 .....	311 2 54.3	-285.4	58 4.0	117 16 20.8	-1.9
8		29.84	53.6	60.9	$\lambda^2$ Sagittarii .....	313 6 56.5	-241.2	2 50.1	115 11 34.7	-0.5
9		29.84	53.3	59.9	R.H.C. 2990 .....	64 0 51.5	+38.7	1 24.7	4 13 0.1	+8.9
10		29.83	53.5	59.0	Rümker 8047 ...	346 17 38.4	-54.8	16 38.6	81 57 46.2	+8.4
11		"	"	"	B.A.C. 7017 .....	44 38 15.0	+15.0	38 25.2	23 35 59.6	+10.6
12		"	"	"	Groom. 3260 .....	62 19 17.6	+36.3	19 47.9	5 54 36.9	+9.1
13		29.83	53.0	58.1	Oeltz. Arg. 21012.	53 18 45.3	+24.8	19 3.9	14 55 20.9	+10.0
14		"	"	"	Oeltz. Arg. 21410.	52 27 20.5	+23.7	27 39.1	15 46 45.7	+10.0
15	Aug. 21	.....	.....	.....	Wire (Nad. Obs.) R.	210 0 5.8	.....	.....	.....	.....
16	Aug. 23	30.03	61.6	67.8	43 Camelop. S.P.	89 10 16.9	+94.9	11 46.1	20 57 21.3	+4.9
17		30.03	60.7	66.9	16 Lyre .....	24 58 53.6	-5.0	58 42.4	43 15 42.4	+9.9
18		"	60.4	"	$\delta$ Sagittarii .....	319 5 4.7	-163.0	2 15.9	109 12 8.9	-1.2
19		"	60.0	"	B.A.C. 6666 .....	311 2 52.5	-283.4	58 4.3	117 16 20.5	-2.0
20		30.04	60.3	65.8	42 Aquile .....	333 18 21.4	-86.5	16 50.2	94 57 34.6	+3.9
21		"	"	"	15 Cygni .....	15 15 46.0	-15.0	15 25.5	52 58 59.3	+10.6
22		"	"	"	58 Aquile .....	338 10 9.9	-72.5	8 51.7	90 5 33.1	+6.3
23		30.04	58.9	64.9	B.A.C. 6896 .....	354 58 48.7	-40.0	58 2.5	73 16 22.3	+9.5
24		"	57.2	"	69 Aquile .....	265 5 28.3	+82.0	6 44.7	93 21 9.5	+8.6
25		"	"	"	74 Draconis ... R.	181 10 33.5	-31.6	9 56.3	9 24 21.1	+10.5
26		30.05	56.3	64.0	B.A.C. 7300 .....	312 40 57.9	-249.7	36 42.7	115 37 42.1	+8.8
27		"	"	"	$\epsilon$ Capricorni .....	320 50 59.8	-149.7	48 24.6	107 26 0.2	+11.7
28		"	"	"	$\beta$ Aquarii .....	332 4 36.5	-91.5	2 59.1	96 11 25.7	+13.4
29		30.04	55.2	62.3	$\gamma$ Capricorni .....	320 59 6.0	-148.9	56 31.0	107 17 53.8	+13.5
30		"	55.2	"	$\delta$ S.L. ....	322 10 49.7	-140.2	74 43.3	104 59 41.5	.....
31		"	54.0	"	50 Aquarii .....	324 2 5.8	-128.6	59 52.1	104 14 32.7	+17.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' .8$ .

Correction for Runs on  $5'$  = for Aug. 20, +  $1'' .6$ , for Aug. 23, +  $1'' .7$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 20,  $30^{\circ} 0' 5'' .8$ , for Aug. 23,  $30^{\circ} 0' 5'' .8$ .

1-4, 7, 8, 27, 28, 29, 31. Very unsteady.

6. Semi-diameter, +  $14' 50'' .2$ ; Parallax, +  $53' 17'' .4$ . Great undulation. 10, 11, 18. Unsteady.

13, 17, 23. Nearest division. 24, 25. To deduce Geoc. N.P.D., for Reflexion Observations, add  $188^{\circ} 14' 24'' .8$  to corrected circle-reading.

26. Faint. 30. Semi-diameter, +  $15' 8'' .5$ ; Parallax, +  $51' 10'' .8$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, for Direct observations, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' .8$ .

No. for Ref.	Day of Observation.	Baro- meter.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	o	o	o	o
1	Aug. 23	30.03	54.0	61.1	$\sigma$ Aquarii .....	326 52 31.2	-113.3	50 33.0	101 23 51.8	+18.2
2	Aug. 25	29.99	51.0	62.1	$\chi^1$ Sagittarii .....	313 31 37.8	-236.3	27 36.2	114 46 48.6	-2.0
3	"	"	"	"	$\lambda^1$ Sagittarii .....	313 16 55.5	-240.6	12 49.7	115 1 35.1	-0.9
4	"	29.98	50.5	60.0	B.A.C. 6746 .....	322 29 7.6	-139.2	26 42.2	105 47 42.6	+2.1
5	"	"	"	"	R.H.C. 2990 .....	64 0 51.6	+39.2	1 25.2	4 12 59.6	+10.3
6	"	29.99	50.1	58.1	B.A.C. 6986 .....	18 10 35.2	-12.2	10 17.3	50 4 7.5	+12.4
7	"	"	49.9	"	B.A.C. 7070 .....	315 39 43.1	-204.3	36 12.8	112 38 12.0	+5.7
8	"	"	"	"	Radcliffe 4926 ...	64 2 41.1	+39.3	3 15.4	4 11 9.4	+10.6
9	"	30.00	49.4	57.5	$\omega$ Capricorni .....	310 52 38.9	-293.9	47 40.0	117 26 44.8	+7.1
10	"	"	49.1	"	$\eta$ Capricorni .....	317 52 48.9	-178.4	49 45.6	110 24 39.2	+9.5
11	"	30.00	49.6	56.9	W.B. xxi. 246. ...	346 34 34.3	-55.0	33 33.3	81 40 51.5	+13.6
12	Aug. 27	29.80	54.0	61.8	24 Aquilæ .....	338 20 46.8	-72.3	19 28.9	89 54 55.9	+3.8
13	"	29.79	52.1	60.1	17 Cygni .....	11 38 58.6	-19.1	38 33.2	56 35 51.6	+11.2
14	"	"	53.1	"	$g$ Sagittarii .....	322 24 56.7	-138.0	22 32.8	105 51 52.0	+3.5
15	"	29.78	52.6	59.0	69 Draconis .....	54 19 15.2	+25.9	19 34.9	13 54 49.9	+12.0
16	"	29.78	51.7	58.8	Radcliffe 4881 ...	62 52 34.0	+37.1	53 6.1	5 21 18.7	+11.3
17	"	29.78	50.7	58.5	B.A.C. 7217 .....	57 9 40.2	+29.6	10 3.8	11 4 21.0	+12.0
18	Aug. 28	29.70	50.0	61.0	$\psi$ Sagittarii .....	312 48 43.6	-247.5	44 31.4	115 29 53.4	-3.3
19	"	"	"	"	$\delta$ Aquilæ .....	349 54 4.0	-48.4	53 9.3	78 21 15.5	+6.9
20	"	29.69	49.5	58.7	B.A.C. 6712 .....	36 32 31.4	+6.6	32 32.9	31 41 51.9	+12.4
21	"	"	"	"	R.H.C. 2990 .....	64 0 52.6	+38.9	1 25.8	4 12 59.0	+11.1
22	"	29.69	48.7	57.5	R.H.C. 3015 .....	64 51 46.0	+40.2	52 20.8	3 22 4.0	+11.1
23	"	29.69	48.6	57.0	$\delta^2$ Cygni .....	14 37 23.6	-15.9	37 2.6	53 37 22.2	+12.8
24	"	.....	...	...	Wire(Nad.Oba.)R.	210. 0 6.0	.....	.....	.....	.....
25	Aug. 30	29.63	50.2	60.9	B.A.C. 6723 .....	29 10 44.7	-0.8	10 38.2	39 3 46.6	+12.7
26	"	29.63	50.1	60.1	$\gamma$ Aquilæ .....	348 31 42.1	-50.7	30 46.0	79 43 38.8	+8.3
27	"	"	"	"	11 Sagittæ .....	354 39 56.1	-40.7	39 9.4	73 35 15.4	+10.1
28	"	29.63	50.0	59.0	B.A.C. 6923 .....	318 29 50.1	-169.8	26 54.2	109 47 30.6	+3.9
29	"	"	"	"	B.A.C. 6986 .....	18 10 35.1	-12.0	10 17.3	50 4 7.5	+13.6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for Aug. 25, +  $1''$ .7, for Aug. 27, +  $1''$ .8, for Aug. 28, +  $1''$ .8, for Aug. 30, +  $1''$ .8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Aug. 25,  $30^\circ 0' 5''$ .9, for Aug. 27,  $30^\circ 0' 5''$ .9, for Aug. 28,  $30^\circ 0' 6''$ .0, for Aug. 30,  $30^\circ 0' 6''$ .0.

1-4, 9, 10, 20. Very unsteady.

5. Red?

7. Very faint.

Aug. 27. Cloudy.

13. Nearest division.

14. Scarcely visible.

18, 19. Unsteady.

22. Extremely faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Mikrosopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Aug. 30	29.63	50.0	59.0	R.H.C. 3102 .....	62 58 10.6	+ 37.2	58 42.9	5 15 41.9	+12.3
2	"	"	49.7	"	(S) Capricorni ...	318 43 48.2	-167.7	40 55.9	109 33 28.9	+ 7.2
3	"	"	49.1	"	ω Capricorni .....	310 52 33.6	-290.5	47 38.0	117 26 46.8	+ 6.7
4	"	29.63	48.6	57.0	10 Aquarii .....	332 14 29.3	-91.0	12 52.1	96 1 32.7	+11.2
5	"	29.63	48.5	56.6	W.B. xxi. 249. ...	346 37 37.9	-54.3	36 38.5	81 37 46.3	+14.3
6	"	29.63	48.9	56.1	ε Capricorni .....	318 11 35.5	-173.2	8 36.9	110 5 47.9	+12.8
7	Sept. 1	29.64	52.2	60.9	B.A.C. 6563 .....	55 4 57.9	+ 26.8	5 18.7	13 9 6.1	+12.1
8	"	29.64	51.4	60.2	δ Sagittarii .....	319 5 4.6	-163.9	2 14.7	109 12 10.1	- 1.4
9	"	"	"	"	δ Aquilæ .....	341 5 47.9	-65.6	4 36.6	87 9 48.2	+ 5.3
10	"	"	50.7	"	α Vulpeculæ .....	2 37 59.2	-29.7	37 24.5	65 37 0.3	+10.0
11	"	"	"	"	θ Cygni .....	28 8 22.1	- 1.9	8 15.3	40 6 9.5	+13.2
12	"	29.65	49.9	59.0	R.H.C. 2989 .....	64 1 12.3	+ 38.8	1 45.5	4 12 39.3	+12.2
13	"	"	"	"	R.H.C. 3015 .....	64 51 47.8	+ 40.0	52 22.4	3 22 2.4	+12.2
14	"	29.65	49.0	58.0	δ <sup>2</sup> Cygni .....	14 40 24.9	-15.8	40 3.2	53 34 21.6	+13.5
15	"	29.65	48.8	57.6	B.A.C. 7017 .....	44 38 19.6	+ 15.0	38 29.7	23 35 55.1	+14.2
16	"	"	"	"	Groom. 3260 .....	62 19 21.0	+ 36.4	19 51.2	5 54 33.6	+13.0
17	"	"	"	"	51 Cygni .....	28 4 41.3	- 1.9	4 33.3	40 9 51.5	+15.1
18	"	29.66	49.1	56.9	1 Equulei (2d) ...	341 60 54.6	-63.8	59 45.1	86 14 39.7	+12.6
19	"	"	"	"	γ Equulei .....	347 43 55.6	-52.3	42 58.6	80 31 26.2	+14.1
20	"	"	"	"	W.B. xxi. 249. ...	346 37 38.9	-54.4	36 39.4	81 37 45.4	+14.5
21	"	29.67	48.2	56.0	β Aquarii .....	332 4 37.9	-91.8	3 0.0	96 11 24.8	+13.9
22	"	29.67	48.0	55.9	B.A.C. 7590 .....	354 47 50.0	-40.7	47 4.3	73 27 20.5	+16.6
23	Sept. 4	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.0	.....	.....	.....	.....
24	Sept. 6	29.65	53.6	60.9	μ Cephei .....	36 22 27.7	+ 6.4	22 28.9	31 51 55.9	+17.3
25	"	"	"	"	B.A.C. 7642 .....	31 30 25.0	+ 1.5	30 20.6	36 44 4.2	+17.7
26	Sept. 11	.....	...	...	Wire(Nad.Obs.)R.	210 0 6.1	.....	.....	.....	.....
27	Sept. 13	29.98	60.7	68.0	γ Aquilæ .....	348 31 43.7	-50.2	30 48.0	79 43 36.8	+ 9.5
28	"	29.99	61.0	67.7	ω Sagittarii .....	311 38 37.0	-268.4	34 3.7	116 40 21.1	-0.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' 8$ .

Correction for Runs on  $5'$  = for Sept. 1, +  $1'' 7$ , for Sept. 6, +  $1'' 6$ , for Sept. 13, +  $1'' 5$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 1,  $30^{\circ} 0' 6'' 0$ , for Sept. 6,  $30^{\circ} 0' 6'' 0$ , for Sept. 13,  $30^{\circ} 0' 6'' 0$ .

1. Faint.

3, 4, 10, 11, 17. Very unsteady.

7, 8, 9, 22. Unsteady.

Sept. 13. The night very hazy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' 8$ .

No. or Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Sep. 13	29.99	60.4	67.7	B.A.C. 6880 .....	322 28 21.7	-136.6	26 0.1	105 48 24.7	+3.9
2		29.98	58.9	66.3	λ Ursæ Minoris .	67 7 6.4	+43.1	7 44.1	1 6 40.7	+15.2
3	"	58.6	"	"	ρ Capricorni .....	319 60 23.7	-155.2	57 42.6	108 16 42.2	+5.7
4	"	"	"	"	ν Capricorni .....	319 39 7.0	-158.4	36 22.3	108 38 2.5	+6.8
5	"	"	"	"	B.A.C. 7217 .....	57 9 47.1	+29.3	10 10.3	11 4 14.5	+17.3
6		29.98	58.9	65.0	Oeltz. Arg. 21410	52 27 28.8	+23.6	27 47.1	15 46 37.7	+18.0
7	"	"	"	"	Lalande 41030 ...	16 12 29.1	-14.0	12 9.8	52 2 15.0	+18.6
8	"	57.5	"	"	33 Capricorni ...	316 50 34.1	-186.5	47 21.8	111 27 3.0	+10.6
9	"	57.1	"	"	B.A.C. 7485 .....	321 27 42.7	-144.5	25 13.0	106 49 11.8	+12.6
10		29.99	56.6	63.7	R.H.C. 3322 .....	63 54 45.6	+38.5	55 18.0	4 19 6.8	+17.1
11	"	"	"	"	B.A.C. 7676 .....	30 26 44.8	+0.4	26 39.7	37 47 45.1	+20.0
12	"	58.0	"	"	B.A.C. 7745 .....	312 26 3.3	-253.1	21 44.5	115 52 40.3	+15.0
13		29.99	57.8	63.0	* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 51 <sup>s</sup>	49 14 38.3	+20.0	14 52.2	18 59 32.6	+18.7
14	Sep. 15	30.04	58.0	65.9	B.A.C. 7083 .....	23 41 48.2	-6.3	41 36.7	44 32 48.1	+18.0
15	"	57.0	"	"	α Cygni .....	23 1 24.2	-7.0	1 11.8	45 13 13.0	+18.3
16	"	"	"	"	32 Vulpeculæ ...	5 46 23.8	-25.8	45 52.6	62 28 32.2	+17.3
17		30.03	56.5	64.0	τ Cygni .....	15 41 32.1	-14.7	41 12.1	52 33 12.7	+19.2
18	Sep. 17	29.53	62.6	67.6	δ S. L. ....	312 0 24.3	-255.7	64 6.3	115 10 18.5	.....
19	"	"	"	"	B.A.C. 6986 .....	354 58 50.9	-39.0	58 5.9	73 16 18.9	+12.6
20		29.52	63.1	67.1	4 Capricorni .....	315 63 0.6	-190.9	59 45.1	112 14 39.7	+3.3
21	Sep. 18	30.02	48.3	63.4	ε Aquilæ .....	348 19 22.6	-51.9	18 25.0	79 55 59.8	+10.1
22	"	48.0	"	"	25 Cygni .....	14 54 25.0	-15.8	54 3.5	53 20 21.3	+16.1
23	"	"	"	"	Rümker 8047 ...	346 17 42.7	-55.7	16 42.4	81 57 42.4	+11.1
24		30.01	48.2	59.9	4 Capricorni .....	315 63 14.0	-200.0	59 49.6	112 14 35.2	+3.3
25	"	48.6	"	"	B.A.C. 7049 .....	315 26 31.1	-208.0	22 58.1	112 51 26.7	+4.3
26	"	47.6	"	"	δ S. L. ....	315 30 22.3	-207.5	94 32.0	111 39 52.8	.....
27		30.01	47.4	57.5	ω Capricorni .....	310 52 39.8	-295.2	47 40.0	117 26 44.8	+5.4
28		30.01	46.9	56.9	θ Capricorni .....	320 29 35.3	-155.2	26 54.5	107 47 30.3	+9.4
29	"	46.2	"	"	ι Capricorni .....	320 51 1.4	-153.0	48 23.2	107 26 1.6	+11.1
30	"	46.6	"	"	B.A.C. 7484 .....	61 53 29.0	+36.4	54 1.1	6 20 23.7	+19.0

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on 5' = for Sept. 15, +  $1''.6$ , for Sept. 17, +  $1''.6$ , for Sept. 18, +  $1''.7$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 15,  $30^{\circ} 0' 5''.8$ , for Sept. 17,  $30^{\circ} 0' 5''.6$ , for Sept. 18,  $30^{\circ} 0' 5''.5$ .

2. Past the centre wire.

8. Strikingly white; certainly not red.

10. Too faint to bear any illumination.

17. Very unsteady.

18. Semi-diameter, +  $14' 53''.0$ ; Parallax, +  $53' 10''.2$ .

19. Nearest division.

Sept. 18. The night very hazy.

21. Temperature of the instrument  $56^{\circ}.1$ .

26. Semi-diameter, +  $14' 59''.0$ ; Parallax, +  $52' 43''.6$ .

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Ref.	Day of Observ.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Sep. 18	30.02	47.1	55.1	45 Capricorni ...	322 53 9.6	-137.7	50 47.5	105 23 37.3	+13.7
2		30.02	46.3	55.0	B.A.C. 7628 .....	333 19 50.4	-88.9	18 15.9	94 56 8.9	+16.5
3		.....	...	...	Wire (Nad. Oba.) R.	210 0 5.5	.....	.....	.....	.....
4	Sep. 22	29.57	62.0	63.0	$\pi$ Capricorni .....	319 36 40.5	-155.4	34 0.2	108 40 24.6	+5.2
5		29.58	62.0	63.6	$\nu$ Capricorni .....	319 39 3.6	-155.1	36 22.8	108 38 2.0	+6.4
6		29.57	61.5	63.9	11 Aquarii .....	332 59 33.7	-86.0	58 2.2	95 16 22.6	+12.0
7		"	61.4	"	$\gamma$ Equulei .....	347 43 55.2	-50.8	42 58.7	80 31 26.1	+16.2
8		29.57	61.0	63.9	1 Pegasi (2d) ...	357 27 19.8	-35.8	26 39.3	70 47 45.5	+18.7
9		"	60.9	"	$\zeta$ Cygni .....	16 9 3.2	-13.8	8 43.7	52 5 41.1	+21.5
10		29.57	60.6	63.9	32 Aquarii .....	336 40 35.6	-75.1	39 15.3	91 35 9.5	+18.0
11		"	60.2	"	$\theta$ Aquarii .....	329 47 7.1	-97.7	45 24.6	98 29 0.2	+17.8
12		29.57	60.0	63.7	35 Pegasi .....	342 14 57.9	-61.7	13 50.8	86 0 34.0	+20.4
13		"	"	"	11 Lacerte .....	21 47 11.9	-8.1	46 59.0	46 27 25.8	+23.2
14		29.56	59.3	63.2	R.H.C. 3493 .....	64 46 43.0	+39.0	47 17.1	3 27 7.7	+19.8
15		"	"	"	B.A.C. 8193 .....	333 24 30.4	-85.0	22 59.9	94 51 24.9	+23.4
16		29.56	59.0	62.9	16 Piscium .....	339 34 54.2	-67.9	33 40.9	88 40 43.9	+24.0
17		"	"	"	19 Piscium .....	340 57 55.2	-64.7	56 45.9	87 17 38.9	+24.5
18		29.55	58.4	62.6	$\delta$ N. L. ....	338 30 22.3	-70.6	58 3.1	89 16 21.7	.....
19		"	"	"	Radcliffe 28 .....	64 10 19.4	+38.2	10 52.3	4 3 32.5	+17.3
20		"	"	"	$\delta$ Piscium .....	345 39 53.9	-54.9	38 53.6	82 35 31.2	+25.6
21		29.54	57.9	62.3	45 Piscium .....	345 10 12.0	-55.9	9 10.8	83 5 14.0	+25.7
22	Sep. 24	30.32	47.0	60.0	B.A.C. 7438 .....	54 39 11.7	+27.1	39 33.2	13 34 51.6	+21.4
23		30.32	46.5	58.2	5 Pegasi .....	356 56 21.3	-38.5	55 37.8	71 18 47.0	+19.8
24		"	47.9	"	B.A.C. 7590 .....	354 47 54.4	-41.6	47 8.2	73 27 16.6	+20.0
25		"	"	"	* R.A. 21 <sup>h</sup> 53 <sup>m</sup> 36 <sup>s</sup>	30 25 23.7	+0.4	25 18.8	37 49 6.0	+23.2
26		"	"	"	B.A.C. 7735 .....	60 25 24.7	+34.7	25 54.1	7 48 30.7	+21.3
27		30.32	45.6	55.1	53 Aquarii (2d) ...	320 49 36.4	-154.5	46 56.4	107 27 28.4	+16.9
28		"	"	"	Piazzi xxii. 158 ...	357 48 12.4	-37.4	47 30.4	70 26 54.4	+22.7
29		"	"	"	45 Pegasi .....	356 45 46.2	-39.0	45 2.0	71 29 22.8	+23.0
30		30.32	43.7	53.9	B.A.C. 8004 .....	324 27 10.2	-130.1	24 55.3	103 49 29.5	+20.3
31		30.32	43.5	53.1	$\psi^2$ Aquarii .....	328 19 17.2	-110.0	17 21.6	99 57 3.2	+22.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Sept. 22, +  $1''$ .4, for Sept. 24, +  $1''$ .3.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 22,  $30^{\circ} 0' 5''$ .4, for Sept. 24,  $30^{\circ} 0' 5''$ .4.

1, 11, 23. Very unsteady.

6, 23-27. Cloudy.

9. Heavy clouds passing.

25. Extremely faint.

4. Temperature of the instrument  $64^{\circ}$ .0. Microscopes damp.

7. Nearest division.

8. Companion hardly visible.

18. Semi-diameter, -  $15' 37''$ .3; Parallax, +  $44' 34''$ .0.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
1	1858. Sep. 25	In. ....	o ...	o ...	Wire(Nad.Obs.)R.	o / " 210 0 5'6	" .....	/ " .....	o / " .....	" .....
2	Sep. 30	29'78	48'0	58'9	B.A.C. 7262 .....	32 13 15'4	+ 2'2	13 12'8	36 1 12'0	+25'5
3	"	"	"	"	W. B. xxi. 246 ...	346 34 39'0	- 54'8	33 38'5	81 40 46'3	+17'1
4	"	29'79	47'6	56'0	Piazzi xxi. 127 ...	315 58 9'6	-199'8	54 45'0	112 19 39'8	+9'8
5	"	"	"	"	3 Pegasi (1st) ...	344 15 22'6	- 59'5	14 17'6	84 0 7'2	+17'9
6	"	"	"	"	B.A.C. 7586 .....	3 9 48'3	- 29'3	9 13'4	65 5 11'4	+21'9
7	"	29'79	47'4	54'0	R.H.C. 3347 .....	64 35 14'7	+ 40'0	35 49'2	3 38 35'6	+22'7
8	"	"	"	"	* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 46 <sup>s</sup>	49 16 6'3	+ 20'3	16 21'3	18 58 3'5	+24'4
9	"	29'81	46'1	53'9	B.A.C. 7865 .....	338 8 1'8	- 74'0	6 42'9	90 7 41'9	+20'6
10	"	"	"	"	R.H.C. 3493 .....	64 46 43'0	+ 40'5	47 18'3	3 27 6'5	+22'7
11	"	29'81	44'6	53'2	$\beta$ Piscium .....	341 19 23'2	- 66'3	18 11'2	86 56 13'6	+22'8
12	"	"	"	"	60 Pegasi .....	4.20.15'5	- 28'1	19 41'9	63 54 42'9	+25'2
13	"	"	"	"	B.A.C. 8126 .....	25 51 12'1	- 4'2	51 2'6	42 23 22'2	+25'5
14	"	29'81	42'9	52'5	Radcliffe 6108 ...	63 27 45'7	+ 38'7	28 19'5	4 46 5'3	+22'0
15	"	"	"	"	Radcliffe 6172 ...	62 55 5'2	+ 37'9	55 37'5	5 18 47'3	+21'7
16	"	29'82	42'4	51'9	1 Ceti .....	321 39 6'7	-146'8	36 34'1	106 37 50'7	+23'9
17	Oct. 1	29'88	50'9	57'5	R.H.C. 3347 .....	64 35 16'6	+ 39'8	35 50'8	3 38 34'0	+23'0
18	"	29'87	50'5	56'9	B.A.C. 7715 .....	309 21 3'7	-337'2	15 21'1	118 59 3'7	+12'1
19	"	29'87	50'1	56'0	$\zeta^1$ Aquarii .....	337 31 22'8	- 75'2	30 2'2	90 44 22'6	+20'1
20	"	29'87	50'0	55'5	11 Lacerte .....	21 47 14'5	- 8'4	47 0'9	46 27 23'9	+25'5
21	"	29'87	50'4	55'0	Oeltz. Arg. 25223	36 45 52'9	+ 6'9	45 54'3	31 28 30'5	+25'4
22	"	29'87	50'7	54'9	B.A.C. 8147 .....	358 2 23'4	- 36'0	1 42'3	70 12 42'5	+25'3
23	Oct. 2	.....	...	...	Wire(Nad.Obs.)R.	210 0 5'7	.....	.....	.....	.....
24	Oct. 5	29'74	46'4	57'0	B.A.C. 7049 .....	315 26 28'5	-207'0	22 56'3	112 51 28'5	+ 3'4
25	"	"	"	"	1 Aquarii .....	338 15 20'9	- 73'6	14 1'8	90 0 23'0	+11'8
26	"	29'74	45'3	55'2	$\eta$ Cephei .....	39 32 1'0	+ 9'8	32 5'8	28 42 19'0	+23'3
27	"	"	44'9	"	10 Aquarii .....	332 14 32'6	- 92'1	12 54'8	96 1 30'0	+11'8
28	"	"	"	"	$\psi$ Capricorni .....	316 32 10'6	-193'7	28 57'9	111 45 32'9	+ 7'6
29	"	29'75	44'1	53'6	W. B. xxi. 246 ...	346 34 39'9	- 55'1	33 39'1	81 40 45'7	+17'3

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' \cdot 8$ .

Correction for Runs on  $5''$  = for Sept. 30, +  $1'' \cdot 2$ , for Oct. 1, +  $1'' \cdot 2$ , for Oct. 5, +  $1'' \cdot 4$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Sept. 30,  $30^{\circ} 0' 5'' \cdot 6$ , for Oct. 1,  $30^{\circ} 0' 5'' \cdot 7$ , for Oct. 5,  $30^{\circ} 0' 5'' \cdot 6$ .

2, 24, 25, 26, 28. Unsteady.

5. Companion of the 6'3 Mag.

8. The first component of a double star.

11, 12. Very unsteady.

13. Hazy looking.

19—22. Cloudy.

28. (V) Capricorni not visible.

29. W. B. xxi. 249 in the field also: its Mag. 8'0.

\* The results of this column are its corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' \cdot 8$ .



No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Oct. 5	29'75	44'1	53'6	Radcliffe 5290 ...	65 11 40'7	+ 41'1	12 16'7	3 2 8'1	+23'6
2		29'76	43'7	52'0	W. B. xxi. 1125 ...	347 2 7'7	- 54'4	1 8'3	81 13 16'5	+20'0
3	"	43'5	"	"	ξ <sup>1</sup> Cephei .....	42 10 54'4	+ 12'6	11 1'7	26 3 23'1	+26'1
4		29'77	42'7	51'1	* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 46 <sup>s</sup>	49 16 6'6	+ 20'5	16 21'8	18 58 3'0	+26'0
5	"	"	"	"	5 Lacertæ .....	25 13 52'0	- 4'9	13 41'2	43 0 43'6	+26'4
6		29'77	42'1	51'0	B.A.C. 7891 .....	309 16 45'7	-344'5	10 56'1	119 3 28'7	+14'7
7	"	"	"	"	R.H.C. 3493 .....	64 46 44'8	+ 40'7	47 20'4	3 27 4'4	+24'4
8	"	42'5	"	"	3 Andromedæ ...	27 31 49'8	- 2'5	31 42'2	40 42 42'6	+26'8
9	"	"	"	"	B.A.C. 8104 .....	51 41 56'9	+ 23'3	42 15'1	16 32 9'7	+25'6
10		29'78	42'5	49'9	B. Z. 376. 138 ...	9 56 40'7	- 21'4	56 14'2	58 18 10'6	+26'6
11	"	"	"	"	Radcliffe 6117 ...	64 0 40'9	+ 39'5	1 15'0	4 13 9'8	+23'8
12		29'78	42'6	49'4	ω <sup>3</sup> Aquarii .....	322 57 21'5	-137'4	54 59'2	105 19 25'6	+22'6
13	"	"	"	"	Groom. 4154 .....	52 59 38'6	+ 24'9	59 57'8	15 14 27'0	+24'6
14		29'79	43'0	49'2	B.A.C. 8333 .....	331 35 35'9	- 94'9	33 55'6	96 40 29'2	+24'7
15	Oct. 8	29'73	41'0	54'5	W. B. xx. 821 ...	342 44 2'1	- 63'4	42 52'9	85 31 31'9	+13'2
16		29'72	40'5	53'1	ω Capricorni .....	310 52 40'8	-296'6	47 39'6	117 26 45'2	+ 3'9
17	"	39'6	"	"	η Capricorni .....	317 52 48'0	-180'4	49 43'0	110 24 41'8	+ 7'5
18	"	"	"	"	ζ Cygni .....	7 54 3'0	- 23'9	53 33'3	60 20 51'5	+21'8
19		29'73	40'3	50'9	Piazzi xxi. 127 ...	315 58 13'1	-202'5	54 46'1	112 19 38'7	+ 8'9
20		29'73	39'5	50'1	3 Pegasi (2d) ...	344 14 45'4	- 60'4	13 39'4	84 0 45'4	+18'2
21	"	39'1	"	"	B.A.C. 7590 .....	354 47 55'6	- 41'5	47 9'5	73 27 15'3	+21'3
22		29'74	38'6	49'0	* R.A. 21 <sup>h</sup> 53 <sup>m</sup> 35 <sup>s</sup>	30 25 28'8	+ 0'4	25 23'9	37 49 0'9	+26'6
23		29'74	39'1	48'9	B.A.C. 7745 .....	312 26 6'1	-261'2	21 39'8	115 52 45'0	+12'6
24	"	38'3	"	"	* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 51 <sup>s</sup>	49 14 44'0	+ 20'6	14 59'0	18 59 25'8	+26'8
25		29'74	38'5	48'0	Piazzi xxii. 158 ...	357 48 14'0	- 37'1	47 32'4	70 26 52'4	+24'5
26	"	38'4	"	"	B.A.C. 7951 (2d) ...	333 18 24'2	- 89'6	16 50'2	94 57 34'6	+20'6
27	"	38'5	"	"	2 Piscium .....	338 28 26'2	- 74'1	27 7'7	89 47 17'1	+22'4
28		29'74	39'3	47'3	2 Cassiopeie .....	36 48 36'0	+ 7'0	48 38'7	31 25 46'1	+27'5
29	"	39'0	"	"	B. Z. 376. 138 ...	9 56 43'1	- 21'5	56 16'6	58 18 8'2	+27'2
30	"	"	"	"	Radcliffe 6117 ...	64 0 43'6	+ 39'8	1 18'1	4 13 6'7	+24'9
31		29'74	37'5	46'9	ω <sup>3</sup> Aquarii .....	322 57 22'6	-138'7	54 59'2	105 19 25'6	+22'4
32	"	"	"	"	Groom. 4154 .....	52 59 38'0	+ 23'9	59 56'3	15 14 28'5	+25'7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24'' \cdot 8$ .

Correction for Runs on  $5' =$  for Oct. 8, +  $1'' \cdot 6$ .

Zenith Point = (App. S.Z.D. + Circle Reading) = for Oct. 8,  $30^{\circ} 0' 5'' \cdot 5$ .

5. Nearest division.

6. \* 7'7 Mag., sf. 3<sup>a</sup>.

16, 27, 28. Unsteady.

18. Ill defined.

20—24. Filmy.

24. Faint.

26. The second component of a close double star.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24'' \cdot 8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o / "	"	/ "	o / "	"
1	Oct. 8	29.74	37.1	46.9	85 Pegasi .....	4 35 13.8	-28.1	34 40.3	63 39 44.5	+27.3
2		29.75	37.1	46.0	6 Ceti .....	321 62 26.5	-145.2	59 56.6	106 14 28.2	+24.1
3	Oct. 9	29.66	46.0	51.9	$\lambda$ Piscis Australis.	309 51 53.8	-321.4	46 27.6	118 27 57.2	+11.8
4	"	"	"	"	* R.A. 22 <sup>h</sup> 19 <sup>m</sup> 40 <sup>s</sup>	358 16 38.7	-35.8	15 58.1	69 58 26.7	+24.2
5		29.66	45.5	51.0	B.A.C. 7891 .....	309 16 42.6	-341.0	10 56.8	119 3 28.0	+14.2
6	"	"	45.4	"	$\gamma$ Aquarii .....	326 58 26.3	-113.4	56 28.7	101 17 56.1	+19.2
7		29.64	45.6	50.1	$\omega$ Aquarii .....	322 57 20.0	-135.9	54 59.5	105 19 25.3	+22.3
8		29.62	45.7	50.0	$\omega$ Piscium .....	344 20 32.3	-59.2	19 27.9	83 54 56.9	+25.9
9		.....	...	...	Wire (Nad. Obs.) R.	210 0 5.4	.....	.....	.....	.....
10	Oct. 11	29.61	39.4	51.0	4 Equulei .....	343 39 43.5	-61.3	38 36.5	84 35 48.3	+15.6
11	"	"	"	"	$\zeta$ Cygni .....	7 54 4.6	-23.8	53 34.9	60 20 49.9	+22.1
12		29.61	40.0	50.0	R.H.C. 3232 .....	63 32 26.3	+38.8	33 0.3	4 41 24.5	+24.7
13	"	"	39.7	"	$\zeta$ Capricorni .....	315 16 43.5	-211.3	13 7.2	113 1 17.6	+8.6
14	"	"	39.3	"	B.A.C. 7485 .....	321 27 43.8	-148.0	25 11.1	106 49 13.7	+11.2
15		29.61	38.9	48.5	B.A.C. 7562 .....	328 35 17.4	-107.3	33 24.6	99 41 0.2	+14.4
16	"	"	38.5	"	W. B. xxi. 1125...	347 2 7.9	-54.7	1 8.3	81 13 16.5	+20.2
17	"	"	"	"	15 Cephei .....	37 22 27.4	+7.6	22 30.2	30 51 54.6	+27.5
18	"	"	38.2	"	B.A.C. 7782 .....	34 45 36.4	+4.9	45 35.9	33 28 48.9	+27.8
19		29.62	37.9	46.8	$\zeta^1$ Aquarii .....	337 31 22.4	-76.5	30 0.7	90 44 24.1	+20.2
20	"	"	38.4	"	B.A.C. 7891 .....	309 16 48.7	-345.7	10 58.0	119 3 26.8	+13.9
21	"	"	38.6	"	R.H.C. 3493 .....	64 46 46.2	+40.8	47 22.0	3 27 2.8	+26.5
22		29.63	38.4	46.0	R.H.C. 3520 .....	62 51 1.2	+37.9	51 33.8	5 22 51.0	+26.6
23		29.63	37.8	45.6	B. Z. 324. 12 ...	358 7 12.7	-36.6	6 31.2	70 7 53.6	+26.5
24	"	"	37.6	"	14 Andromedæ ...	16 42 33.9	-13.9	42 15.2	51 32 9.6	+28.1
25		29.64	37.5	45.0	Oeltz. Arg. 25960	35 31 17.0	+5.7	31 17.5	32 43 7.3	+28.1
26	"	"	"	"	Groom. 4154 .....	52 59 39.2	+25.0	59 58.5	15 14 26.3	+26.7
27		29.64	36.5	44.4	Radcliffe 6314 ...	64 14 4.3	+40.2	14 38.6	3 59 46.2	+25.0
28	"	"	36.3	"	$d$ Piscium .....	345 40 0.1	-57.7	38 56.8	82 35 28.0	+26.8
29		29.64	36.1	43.9	11 Ceti .....	336 22 14.7	-80.1	20 49.7	91 53 35.1	+26.3
30	Oct. 13	30.04	52.1	55.0	16 Pegasi .....	3 30 55.0	-28.9	30 20.6	64 44 4.2	+23.8

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Oct. 9, +  $1''$ .7, for Oct. 11, +  $1''$ .6, for Oct. 13, +  $1''$ .5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Oct. 9,  $30^{\circ} 0' 5''$ .4, for Oct. 11,  $30^{\circ} 0' 5''$ .6, for Oct. 13,  $30^{\circ} 0' 5''$ .8.

2, 18. Very unsteady. 3—7. Cloudy. 5. \* sf. 3<sup>a</sup>. 7. Scarcely visible. 13. Unsteady. 15. \* 6.0 Mag. sf. 17. Three stars some seconds following. 24, 27. Unsteady and ill-defined. Oct. 13. Temperature of the instrument  $55^{\circ}$ 0. Microscopes damp, and the walls and pillars trickling with water.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Oct. 13	30°05	52°7	55°0	B.A.C. 7753 .....	12 9 36°0	-18°6	9 11°5	56 5 13°3	+26°2
2		30°05	52°3	55°1	5 Lacertæ .....	25 13 53°7	-4°8	13 42°8	43 0 42°0	+28°1
3	Oct. 16	.....	...	...	Wire(Nad.Obs.)R.	210 0 6°1	.....	.....	.....	.....
4	Oct. 20	29°65	49°4	54°9	♃ S. L. ....	341 35 21°7	-64°7	93 1°2	85 41 23°6	.....
5	"	"	"	"	Radcliffe 134 .....	62 7 54°1	+36°1	8 25°2	6 5 59°6	+27°4
6	"	29°64	49°0	54°3	B.A.C. 174 .....	333 8 28°2	-87°9	6 55°4	95 7 29°4	+26°1
7	"	"	"	"	♄ Piscium .....	345 4 36°4	-57°4	3 33°0	83 10 51°8	+27°6
8	"	"	47°9	"	21 Ceti .....	328 46 4°5	-104°6	44 14°3	99 30 10°5	+26°0
9	Oct. 23	29°94	47°4	54°0	B.A.C. 204 .....	337 44 49°8	-75°2	43 28°8	90 30 56°0	+26°7
10	"	.....	...	...	Wire(Nad.Obs.)R.	210 0 5°7	.....	.....	.....	.....
11	Oct. 26	30°19	43°6	53°1	34 Pegasi .....	341 56 14°2	-65°9	55 4°3	86 19 20°5	+26°9
12	Oct. 28	30°03	42°6	51°9	Radcliffe 56 .....	66 53 42°9	+44°3	54 23°3	1 20 1°5	+30°4
13	"	"	"	"	Groom. 67 .....	63 46 21°8	+39°5	46 58°2	4 27 26°6	+30°3
14	"	30°03	42°0	50°0	B.A.C. 147 .....	336 59 1°9	-78°4	57 39°7	91 16 45°1	+26°2
15	"	"	41°7	"	B.A.C. 204 .....	337 44 50°9	-76°3	43 31°1	90 30 53°7	+26°5
16	"	"	41°5	"	Groom. 144 .....	66 29 47°5	+43°8	30 27°7	1 43 57°1	+28°9
17	"	30°03	41°4	48°8	25 Ceti .....	332 40 38°6	-92°0	39 3°3	95 35 21°5	+26°2
18	"	30°04	40°9	47°3	B.A.C. 443 .....	47 31 46°1	+18°7	32 1°9	20 42 22°9	+28°4
19	Oct. 30	30°46	36°6	47°0	* R.A. 22 <sup>b</sup> 19 <sup>m</sup> 40 <sup>s</sup>	358 16 37°8	-37°5	15 58°2	69 58 26°6	+25°7
20	"	"	34°7	"	Piazzi xxii. 158...	357 48 15°6	-38°3	47 35°7	70 26 49°1	+26°1
21	"	30°44	35°9	44°7	Groom. 3888 .....	23 42 44°0	-6°7	42 35°5	44 31 49°3	+31°4
22	"	"	35°5	"	R.H.C. 3520 .....	62 51 4°8	+39°2	51 41°7	5 22 43°1	+32°4
23	"	30°44	35°4	43°6	A Piscium .....	339 37 25°1	-73°3	36 9°9	88 38 14°9	+23°0
24	"	30°44	34°9	43°1	B.A.C. 8104 .....	51 42 3°6	+24°2	42 25°8	16 31 59°0	+33°2
25	"	"	34°8	"	B.A.C. 8156 .....	10 0 26°2	-22°2	0 1°4	58 14 23°4	+30°4
26	"	"	33°9	"	Radcliffe 6108 ..	63 27 52°1	+40°3	28 30°7	4 45 54°1	+32°5
27	"	30°44	34°1	41°9	Radcliffe 6172 ..	62 55 13°1	+39°4	55 49°9	5 18 34°9	+32°4

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Oct. 20, +  $1''$ .5, for Oct. 23, +  $1''$ .6, for Oct. 26, +  $1''$ .6, for Oct. 28, +  $1''$ .6, for Oct. 30, +  $1''$ .7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Oct. 20,  $30^{\circ} 0' 5''$ .9, for Oct. 23,  $30^{\circ} 0' 5''$ .7, for Oct. 26,  $30^{\circ} 0' 4''$ .4, for Oct. 28,  $30^{\circ} 0' 3''$ .5, for Oct. 30,  $30^{\circ} 0' 2''$ .7.

2, 12. Nearest division.

Oct. 20. Thin clouds over the whole sky.

4. Semi-diameter, +  $15' 47''$ .5; Parallax, +  $43' 2''$ .5.

9. Very faint.

13, 16, 22. Unsteady.

21—25. Hazy.

\* The results of this column are corrected for Runa, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o	o	o	o	o
1	Oct. 30	30.44	34.2	41.9	B.A.C. 8321 .....	60 38 25.4	+36.1	39 0.0	7 35 24.8	+32.4
2		30.44	34.5	41.4	Radcliffe 6314 ...	64 14 9.1	+41.4	14 47.5	3 59 37.3	+31.8
3		"	33.9	"	38 Piscium (2d) .	346 20 59.1	-58.1	19 58.6	81 54 26.2	+27.4
4		"	34.5	"	B.A.C. 97 .....	340 17 46.4	-71.7	16 32.9	87 57 51.9	+26.5
5		"	33.4	"	B.A.C. 147 .....	336 59 3.9	-80.9	57 40.0	91 16 44.8	+26.1
6		30.44	33.9	40.6	$\phi^3$ Ceti .....	326 52 16.6	-119.8	50 14.9	101 24 9.9	+24.7
7		.....	...	...	Wire(Nad.Obs.)R.	210 0 2.7	.....	.....	.....	.....
8	Nov. 2	30.24	43.2	48.2	$\gamma$ Aquarii .....	336 10 2.7	-81.1	8 38.5	92 5 46.3	+18.9
9		30.24	43.0	48.0	5 Lacertæ .....	25 13 58.4	-5.0	13 50.0	43 0 34.8	+31.4
10		30.24	43.6	47.3	R.H.C. 3519 .....	62 31 43.2	+37.8	32 18.5	5 42 6.3	+33.2
11		"	43.1	"	Oeltz. Arg. 25223.	36 46 2.0	+7.0	46 6.3	31 28 18.5	+33.7
12		30.24	42.6	47.1	B.A.C. 8126 .....	25 51 16.7	-4.3	51 9.7	42 23 15.1	+32.9
13		"	42.1	"	14 Andromedæ ...	16 42 37.8	-14.1	42 21.5	51 32 3.3	+32.0
14		30.24	41.9	47.0	74 Pegasi .....	354 18 2.7	-42.8	17 17.8	73 57 7.0	+28.0
15		"	41.4	"	Radcliffe 6172 ...	62 55 14.9	+38.6	55 50.5	5 18 34.3	+33.3
16		30.24	40.9	46.1	B.A.C. 10 .....	309 33 44.3	-341.3	27 59.5	118 46 25.3	+18.3
17		"	41.2	"	9 Ceti .....	325 16 56.8	-125.6	14 48.8	102 59 36.0	+22.9
18		30.24	40.7	45.7	Radcliffe 134 .....	62 7 56.0	+37.5	8 31.4	6 5 53.4	+32.1
19		"	40.4	"	61 Piscium .....	358 24 31.0	-36.7	23 51.0	69 50 33.8	+29.8
20		"	40.0	"	Radcliffe 253 .....	66 28 1.7	+44.2	28 43.8	1 45 41.0	+30.5
21		30.24	39.2	45.0	$\theta$ Cassiopeiæ .....	32 38 31.2	+2.8	38 32.1	35 35 52.7	+31.6
22		30.24	38.5	44.9	B.A.C. 418 .....	313 13 16.2	-250.2	9 4.0	115 5 20.8	+23.1
23	Nov. 6	.....	...	...	Wire(Nad.Obs.)R.	210 0 3.7	.....	.....	.....	.....
24	Nov. 8	30.23	39.2	45.4	$\psi$ Cassiopeiæ .....	45 37 57.2	+16.8	38 11.5	22 36 13.3	+32.3
25		30.23	39.1	45.1	B.A.C. 452 .....	311 23 7.2	-289.5	18 15.3	116 56 9.5	+22.0
26		"	39.0	"	R.H.C. 227 .....	62 34 50.2	+38.3	35 25.0	5 38 59.8	+30.5
27		30.23	38.8	45.0	Radcliffe 500 .....	66 1 50.3	+43.6	2 31.1	2 11 53.7	+29.6
28		"	38.9	"	$\zeta$ Ceti .....	327 14 30.2	-115.9	12 30.7	101 1 54.1	+25.2
29		30.23	38.4	44.1	B.A.C. 629 .....	348 35 46.0	-52.8	34 50.0	79 39 34.8	+27.8
30		"	38.4	"	16 Arietis .....	3 31 21.1	-29.9	30 48.2	64 43 36.6	+28.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''.8$ .

Correction for Runs on  $5'$  = for Nov. 2, +1''7, for Nov. 8, +1''6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Nov. 2,  $30^{\circ} 0' 3''.1$ , for Nov. 8,  $30^{\circ} 0' 3''.4$ .

6, 17. Very unsteady.

8—12. Cloudy.

9, 16. Nearest division.

16. Hazy looking.

22. Clouded over.

26. Very faint.

28. Unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''.8$ .

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.	
			Ext.	Int.							
	1858.	In.	°	°		°	'	"	°	'	"
1	Nov. 8	30.23	38.6	44.0	67 Ceti .....	331 11 50.1	-98.7	10 8.6	97 4 16.2	+25.7	
2	Nov. 9	30.33	33.6	44.0	Radcliffe 5776 ...	65 35 50.2	+43.5	36 30.7	2 37 54.1	+33.9	
3		30.32	32.2	43.5	γ <sup>2</sup> Aquarii .....	317 56 39.7	-186.2	53 30.7	110 20 54.1	+14.3	
4		"	31.4	42.9	R.H.C. 3493 .....	64 46 50.3	+42.4	47 30.0	3 26 54.8	+34.5	
5		"	30.3	"	R.H.C. 3519 .....	62 31 41.7	+39.0	32 17.9	5 42 6.9	+34.9	
6		"	30.0	"	B.A.C. 8048 .....	58 15 30.0	+32.9	15 59.8	9 58 25.0	+35.2	
7		"	29.7	"	B.A.C. 8104 .....	51 42 4.9	+24.4	42 26.7	16 31 58.1	+35.6	
8		30.32	29.6	40.1	65 Pegasi .....	358 18 39.0	-37.8	17 59.1	69 56 25.7	+28.7	
9		"	29.5	"	Radcliffe 6108 ...	63 27 55.9	+40.5	28 34.0	4 45 50.8	+35.3	
10		"	29.7	"	B.A.C. 8239 .....	325 48 48.7	-126.1	46 38.9	102 27 45.9	+20.3	
11		30.32	30.0	38.9	B.A.C. 8288 .....	323 5 47.0	-142.8	3 21.2	105 11 3.6	+20.0	
12		"	29.7	"	B.A.C. 8338 .....	39 38 6.3	+10.4	38 14.4	28 36 10.4	+35.5	
13		"	29.2	"	B.A.C. 6 .....	57 10 2.5	+31.5	10 30.7	11 3 54.1	+35.4	
14		"	29.0	"	Radcliffe 33 .....	64 7 15.3	+41.6	7 54.3	4 6 30.5	+34.8	
15		30.32	28.6	37.8	9 Ceti .....	325 16 57.9	-129.4	14 45.8	102 59 39.0	+22.2	
16		"	28.7	"	12 Ceti .....	333 31 49.3	-92.4	30 14.2	94 44 10.6	+24.7	
17		30.32	28.3	37.0	B.A.C. 154 .....	59 56 56.6	+35.4	57 29.3	8 16 55.5	+34.4	
18		"	28.7	"	B.A.C. 204 .....	337 44 52.1	-79.1	43 29.7	90 30 55.1	+26.0	
19		30.31	29.1	36.5	20 Ceti .....	336 21 21.0	-83.2	19 54.9	91 54 29.9	+25.9	
20	"	29.0	"	Groom. 175 .....	65 44 32.6	+44.0	45 13.3	2 29 11.5	+32.9		
21	30.31	29.8	36.1	B.A.C. 341 .....	353 10 46.6	-45.8	9 57.7	75 4 27.1	+29.2		
22	"	30.5	"	ψ Cassiopeie .....	45 37 54.2	+17.1	38 8.9	22 36 15.9	+32.6		
23	30.31	30.2	36.0	τ Andromedæ ...	18 6 33.9	-12.9	6 18.2	50 8 6.6	+31.2		
24	"	29.6	"	Lalande 3405 ...	1 40 16.9	-33.0	39 40.7	66 34 44.1	+29.4		
25	"	29.7	"	B.A.C. 612 .....	343 36 39.5	-64.2	35 32.5	84 38 52.3	+27.3		
26	30.30	29.2	35.9	16 Arietis .....	3 31 22.6	-30.5	30 49.2	64 43 35.6	+28.8		
27	Nov. 10	30.21	33.6	41.6	δ Aquarii .....	321 42 45.6	-151.0	40 12.4	106 34 12.4	+15.9	
28		"	"	"	3 Andromedæ ...	27 31 56.5	-2.6	31 51.4	40 42 33.4	+33.9	
29		30.20	34.9	40.9	ψ <sup>2</sup> Aquarii .....	328 19 14.6	-111.6	17 19.7	99 57 5.1	+19.6	
30		"	34.7	"	υ Pegasi .....	0 52 54.5	-33.6	52 18.7	67 22 6.1	+29.4	
31		30.20	34.6	40.3	Radcliffe 6117 ...	64 0 51.1	+40.8	1 29.1	4 12 55.7	+35.9	

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Nov. 9, +1''6, for Nov. 10, +1''6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Nov. 9,  $30^{\circ} 0' 3''$ .3, for Nov. 10,  $30^{\circ} 0' 3''$ .1.

1. Unsteady.

10. Nearest division.

10, 11, 16, 18, 19, 23, 25. Very unsteady.

12-14. Filmy.

20. Extremely faint.

21. Faint.

22-24. Clouds passing.

27-31. Hazy.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Nov. 10	30.20	33.5	40.3	21 Piscium .....	338 33 24.6	-75.8	32 6.8	89 42 18.0	+24.4
2	"	"	33.4	"	B.A.C. 8338 .....	39 38 6.1	+10.3	38 14.3	28 36 10.5	+35.7
3	"	30.20	33.0	39.3	B.A.C. 6 .....	57 10 2.7	+31.1	10 30.7	11 3 54.1	+35.6
4	"	30.20	32.2	39.0	9 Ceti .....	325 16 57.7	-127.9	14 47.3	102 59 37.5	+22.1
5	"	"	33.3	"	Radcliffe 104 .....	64 9 50.1	+41.1	10 28.0	4 3 56.8	+34.6
6	"	30.20	32.6	38.5	7 <sup>1</sup> Cassiopeiae ...	35 18 35.9	+5.6	18 39.6	32 55 45.2	+34.5
7	"	"	32.2	"	B.A.C. 290 .....	31 41 35.4	+1.8	41 34.6	36 32 50.2	+33.7
8	"	30.19	31.9	37.9	ζ <sup>1</sup> Piscium .....	345 5 21.1	-60.5	4 17.6	83 10 7.2	+27.8
9	"	30.19	31.5	37.7	ψ Cassiopeiae .....	45 37 55.9	+17.0	38 10.7	22 36 14.1	+33.0
10	"	"	31.7	"	B.A.C. 509 .....	38 4 34.7	+8.6	4 40.1	30 9 44.7	+31.9
11	"	"	31.1	"	β Arietis .....	358 22 20.7	-37.4	21 41.0	69 52 43.8	+29.0
12	"	30.18	30.2	36.4	β Trianguli .....	12 34 8.2	-19.1	33 45.7	55 40 39.1	+29.5
13	Nov. 11	30.06	34.4	42.0	R.H.C. 3520 .....	62 51 9.0	+38.8	51 45.2	5 22 39.6	+35.3
14	"	30.06	34.1	41.5	B.A.C. 8064 .....	309 28 55.1	-347.0	23 4.8	118 51 20.0	+12.9
15	"	"	"	"	B.A.C. 8104 .....	51 42 7.4	+24.0	42 29.1	16 31 55.7	+36.0
16	"	30.06	33.2	40.9	Groom. 4101 .....	64 45 47.4	+41.8	46 26.5	3 27 58.3	+35.7
17	"	"	32.7	"	19 Piscium .....	340 58 0.6	-69.4	56 49.2	87 17 35.6	+24.9
18	"	30.05	32.3	40.0	1 Ceti .....	321 39 1.5	-151.0	36 27.2	106 37 57.6	+19.8
19	"	"	31.9	"	B.A.C. 6 .....	57 10 3.3	+31.0	10 31.3	11 3 53.5	+35.9
20	"	"	"	"	d Piscium .....	345 39 57.0	-59.0	38 55.0	82 35 29.8	+27.3
21	"	30.05	31.4	39.0	Groom. 67 .....	63 46 24.0	+40.4	47 1.8	4 27 23.0	+35.0
22	"	"	31.1	"	B.A.C. 191 .....	333 38 14.3	-90.8	36 41.5	94 37 43.3	+24.9
23	"	30.04	31.7	38.8	Groom. 144 .....	66 29 51.2	+44.7	30 32.9	1 43 51.9	+33.8
24	"	"	32.0	"	ψ <sup>3</sup> Piscium .....	358 14 33.9	-37.4	13 53.4	70 0 31.4	+30.2
25	"	30.04	34.5	38.8	39 Ceti .....	335 1 20.0	-85.6	59 51.8	93 14 33.0	+25.9
26	"	"	34.7	"	B.A.C. 452 .....	311 23 6.7	-290.5	18 14.2	116 56 10.6	+21.4
27	"	30.03	34.6	39.1	B.A.C. 504 .....	312 34 25.9	-263.4	29 59.3	115 44 25.5	+22.0
28	"	"	35.5	"	ζ Ceti .....	327 14 29.0	-116.0	12 29.8	101 1 55.0	+24.8
29	"	"	35.7	"	B.A.C. 612 .....	343 36 37.6	-62.8	35 32.3	84 38 52.5	+27.3
30	"	30.02	36.1	39.9	B.A.C. 669 .....	358 57 53.0	-36.0	57 14.9	69 17 9.9	+28.6
31	Nov. 13	.....	.....	.....	Wire(Nad.Obs.)R.	210 0 2.7	.....	.....	.....	.....

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on  $5' =$  for Nov. 11,  $+1''$ .6.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Nov. 11,  $30^{\circ} 0' 3''$ .0.

1—3. Hazy. 4—12. Foggy. 5, 14. Very faint. 11. Very unsteady and ill defined.

12. Scarcely visible in thick fog. 14, 18. Nearest division. 22, 27. Faint.

23—25. Very unsteady.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Nov. 17	29.56	32.6	39.9	B.A.C. 174 .....	333 8 27.4	-90.7	6 55.3	95 7 29.5	+24.3
2	"	"	32.5	"	γ S. L. ....	345 0 2.3	-59.3	55 41.0	82 18 43.8	.....
3	"	"	"	"	B.A.C. 270 .....	344 20 29.1	-60.7	19 26.0	83 54 58.8	+27.4
4	"	29.55	32.4	38.8	ε Piscium .....	345 23 22.5	-58.5	22 22.5	82 52 2.3	+27.7
5	"	"	"	"	ζ <sup>1</sup> Piscium .....	345 5 20.1	-59.2	4 18.4	83 10 6.4	+27.7
6	"	29.55	31.9	38.0	θ Ceti .....	329 21 35.1	-105.3	19 47.7	98 54 37.1	+24.0
7	"	29.55	30.5	37.5	50 Andromedæ ...	18 56 48.5	-11.6	56 34.9	49 17 49.9	+32.7
8	"	"	"	"	B.A.C. 544 .....	15 29 53.9	-15.4	29 35.9	52 44 48.9	+31.8
9	"	29.55	30.3	37.0	ι Arietis .....	355 22 59.2	-41.1	22 16.5	72 52 8.3	+28.9
10	"	29.55	30.2	36.6	64 Ceti .....	346 10 4.9	-57.2	9 5.1	82 5 19.7	+27.2
11	"	"	29.9	"	B.A.C. 755 .....	348 11 14.6	-53.3	10 19.1	80 4 5.7	+27.0
12	"	29.54	29.7	36.0	77 Ceti .....	329 47 40.9	-103.9	45 55.3	98 28 29.5	+24.4
13	Nov. 18	29.60	32.5	38.0	B.A.C. 8147 .....	358 2 25.5	-37.1	1 46.7	70 12 38.1	+28.8
14	"	"	"	"	Radcliffe 6108 ...	63 27 58.4	+39.3	28 36.2	4 45 48.6	+37.4
15	"	29.61	32.1	37.4	74 Pegasi .....	354 18 1.5	-42.8	17 17.2	73 57 7.6	+28.3
16	"	"	"	"	R.H.C. 3653 .....	62 46 35.6	+38.3	47 11.9	5 27 12.9	+37.6
17	"	29.62	31.6	37.0	ι Ceti .....	321 39 1.2	-149.1	36 29.3	106 37 55.5	+19.1
18	"	"	"	"	α Andromedæ ...	6 33 48.6	-25.8	33 21.6	61 41 3.2	+32.0
19	"	29.62	31.5	36.9	δ Piscium .....	345 39 58.5	-58.2	38 57.8	82 35 27.0	+27.1
20	"	"	30.6	"	Radcliffe 104 .....	64 9 52.9	+40.5	10 30.9	4 3 53.9	+37.0
21	"	"	"	"	δ Andromedæ ...	8 20 23.9	-23.8	19 57.7	59 54 27.1	+32.7
22	"	29.62	29.6	36.0	61 Piscium .....	358 24 31.9	-36.8	23 52.4	69 50 32.4	+30.6
23	"	"	"	"	2 Ursæ Minoris ...	63 43 56.0	+40.0	44 33.1	4 29 51.7	+36.2
24	"	"	28.9	"	ε Piscium .....	345 23 23.8	-59.1	22 23.4	82 52 1.4	+27.7
25	"	"	"	"	30 Ceti .....	327 43 57.3	-113.7	42 0.7	100 32 24.1	+23.4
26	"	29.63	28.3	35.2	ζ <sup>1</sup> Piscium .....	345 5 18.4	-59.8	4 16.2	83 10 8.6	+27.6
27	"	"	"	"	47 Andromedæ ...	15 13 34.9	-15.8	13 17.8	53 1 7.0	+32.9
28	"	"	"	"	* R.A. 1 <sup>h</sup> 23 <sup>m</sup> 15 <sup>s</sup>	340 30 15.3	-71.6	29 1.3	87 45 23.5	+26.6
29	"	29.62	31.0	35.0	γ S. L. ....	351 20 5.4	-47.7	71 58.6	76 2 26.2	.....
30	"	"	"	"	γ Arietis (North) ...	356 51 30.0	-39.0	50 49.0	71 23 35.8	+29.3
31	"	29.63	30.6	35.0	ι Arietis .....	355 22 58.7	-41.2	22 16.0	72 52 8.8	+29.0
32	"	"	"	"	58 Andromedæ ...	15 26 14.4	-15.5	25 56.8	52 48 28.0	+30.9

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Nov. 17, +1''7, for Nov. 18, +1''7.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Nov. 17,  $30^{\circ} 0' 2''$ .6, for Nov. 18,  $30^{\circ} 0' 2''$ .5.

2. Semi-diameter, +15' 50''9; Parallax, +40' 49''7. 4, 5, 25. Unsteady.

7, 9. Very unsteady and ill defined. 11. \* n.f. 17, 23, 25. Nearest division.

17—20. Foggy. 20. Faint. 28. (R) Piscium not visible.

29. Semi-diameter, +16' 6''1; Parallax, +36' 37''3. Great undulation.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correc- tion to Circle Reading for Re- fraction.	Min. and Sec. of Circle Reading finally cor- rected. *	Geocentric N.P.D. of Centre of Object.	Correc- tion to Mean N.P.D. 1858, Jan. 1.
			Rht.	Int.						
	1858.	In.	o	o		o / "	"	' "	o / "	"
1	Nov. 18	29.63	30.6	35.0	Lalande 4249 ...	331 2 9.8	-99.0	0 29.0	97 13 55.8	+24.7
2		29.63	30.5	35.0	B.A.C. 755 .....	348 11 14.7	-53.4	10 19.2	80 4 5.6	+27.0
3		29.63	29.6	34.9	$\theta$ Persei .....	26 52 27.4	-3.3	52 22.4	41 22 2.4	+28.9
4		"	"	"	17 Persei .....	12 43 35.4	-18.6	43 15.5	55 31 9.3	+27.8
5		29.63	29.0	34.9	$\rho^3$ Arietis .....	355 42 49.5	-40.9	42 7.1	72 32 17.7	+26.4
6	Nov. 20	.....	...	...	Wire (Nad. Obs.) R.	210 0 2.4	.....	.....	.....	.....
7	Nov. 22	30.03	30.3	36.8	$\epsilon$ Piscium .....	343 7 21.4	-64.6	6 15.1	85 8 9.7	+24.5
8		"	30.0	"	$\delta$ Sculptoris .....	309 25 40.2	-351.8	19 46.1	118 54 38.7	+34.6
9		30.02	29.6	35.9	B.A.C. 8333 .....	331 35 35.8	-98.3	33 55.2	96 40 29.6	+22.0
10		"	"	"	$\alpha$ Andromedæ ...	6 33 49.5	-26.3	33 22.1	61 41 2.7	+32.2
11		30.02	29.6	35.0	Groom. 1884 S.P.	69 45 1.1	+50.4	45 49.0	1 31 24.2	+34.3
12		"	"	"	13 Cassiopeie ...	43 58 52.5	+15.2	59 4.8	24 15 20.0	+38.0
13		30.02	27.2	34.5	B.A.C. 147 .....	336 59 3.2	-80.8	57 39.6	91 16 45.2	+24.9
14		30.02	25.4	34.0	$\beta$ Ceti .....	319 31 37.7	-171.1	28 44.7	108 45 40.1	+20.0
15		"	"	"	20 Ceti .....	336 21 18.6	-83.1	19 53.5	91 54 31.3	+25.1
16		30.01	24.4	33.0	Groom. 195 .....	64 37 31.3	+42.3	38 12.0	3 36 12.8	+37.1
17		30.01	24.4	32.0	B.A.C. 444 .....	45 55 21.0	+17.5	55 36.1	22 18 48.7	+35.9
18		"	24.2	"	B.A.C. 490 .....	349 36 58.5	-52.1	36 4.6	78 38 20.2	+28.4
19		30.01	23.6	31.5	$\tau$ Ceti .....	321 36 13.6	-154.0	33 37.5	106 40 47.3	+22.2
20		"	"	"	7 Arietis .....	1 8 16.9	-33.8	7 41.8	67 6 43.0	+30.1
21		30.01	25.0	30.9	B.A.C. 641 .....	345 19 5.4	-60.5	18 2.1	82 56 22.7	+27.0
22		30.01	25.6	30.8	B.A.C. 708 .....	339 21 10.3	-74.5	19 53.7	88 54 31.1	+25.7
23		30.01	25.0	30.4	75 Ceti .....	336 36 22.8	-82.3	34 58.5	91 39 26.3	+24.9
24		"	25.7	"	41 Arietis .....	4 55 44.6	-28.6	55 13.8	63 19 11.0	+27.7
25		"	25.1	"	$\epsilon$ Arietis .....	359 1 40.9	-36.8	1 2.2	69 13 22.6	+26.6
26		30.01	24.7	30.0	Groom. 595 .....	62 38 0.2	+39.2	38 38.0	5 35 46.8	+26.5
27	Nov. 23	29.84	19.7	30.5	$\delta$ Sculptoris .....	309 25 45.6	-357.6	19 45.7	118 54 39.1	+34.7
28		29.83	19.4	29.1	Groom. 4193 .....	64 9 19.5	+41.8	9 58.5	4 4 26.3	+38.7
29		29.83	19.5	28.9	$\alpha$ Andromedæ ...	6 33 49.6	-26.7	33 21.7	61 41 3.1	+32.2
30		"	19.5	"	38 Piscium (1st) .	346 20 56.6	-58.7	19 55.6	81 54 29.2	+27.1

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Nov. 22, +1''8, for Nov. 23, +1''8.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Nov. 22,  $30^{\circ} 0' 2''$ .5, for Nov. 23,  $30^{\circ} 0' 2''$ .6.

3, 17. Ill defined.

12, 13. Nearest division.

14. Very unsteady.

22—26. Fog.

27—29. Filmy.

30. Faint; a thick mist.

\* The results of this column are corrected for Runa, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.



No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	" "	° ' "	"
1	Nov. 23	29.82	19.5	27.0	47 Piscium .....	355 22 1.5	-42.5	21 17.1	72 53 7.7	+29.9
2		29.81	19.3	26.1	$\beta$ Ceti .....	319 31 39.2	-172.2	28 45.0	108 45 39.8	+19.9
3		29.80	20.0	25.4	B.A.C. 270 .....	344 20 27.7	-62.9	19 22.4	83 55 2.4	+27.2
4		29.80	19.6	24.8	B.A.C. 352 .....	22 50 1.2	-7.7	49 50.9	45 24 33.9	+35.0
5		29.80	19.0	24.1	B.A.C. 510 .....	20 9 9.2	-10.7	8 55.6	48 5 29.2	+33.5
6		29.80	18.6	24.0	$\zeta$ Ceti .....	327 14 31.9	-119.3	12 29.8	101 1 55.0	+23.4
7		29.80	18.5	24.0	$\kappa$ Arietis .....	0 13 41.7	-35.3	13 5.1	68 1 19.7	+29.5
8		29.79	18.5	24.0	B.A.C. 700 .....	34 43 27.7	+5.1	43 31.4	33 30 53.4	+32.4
9		29.79	18.7	23.7	B.A.C. 789 .....	345 6 57.5	-61.3	5 54.3	83 8 30.5	+26.1
10		"	19.0	"	36 Arietis .....	355 25 13.9	-42.4	24 29.0	72 49 55.8	+27.1
11		29.78	18.7	23.5	$\rho^1$ Eridani .....	330 3 4.1	-106.2	1 16.4	98 13 8.4	+23.2
12	Dec. 2	29.78	38.8	46.2	9 Ceti .....	325 16 51.2	-124.4	14 44.6	102 59 40.2	+20.0
13		29.78	38.4	45.6	B.A.C. 138 .....	332 56 33.5	-90.9	55 0.3	95 19 24.5	+24.9
14		"	"	"	B.A.C. 178 .....	2 6 32.2	-31.3	5 58.6	66 8 26.2	+31.9
15		29.80	38.1	44.8	$\gamma^1$ Cassiopeiae ...	35 18 43.4	+5.5	18 45.5	32 55 39.3	+38.7
16		29.80	37.5	44.2	Groom. 195 .....	64 37 36.6	+40.9	38 15.6	3 36 9.2	+39.8
17		"	"	"	45 Andromedæ ...	15 13 21.1	-15.6	13 3.9	53 1 20.9	+34.7
18		29.81	37.2	43.9	B.A.C. 378 .....	55 3 40.6	+27.7	4 6.8	13 10 18.0	+39.3
19		"	37.1	"	95 Piscium .....	342 53 8.6	-63.8	52 3.1	85 22 21.7	+26.5
20		"	"	"	R.H.C. 227 .....	62 34 56.1	+37.9	35 31.1	5 38 53.7	+38.2
21		29.82	37.4	43.2	Lalande 3310 ...	4 1 21.9	-28.9	0 50.6	64 13 34.2	+31.3
22		"	"	"	Radcliffe 559 .....	66 44 24.7	+44.3	45 5.9	1 29 18.9	+36.4
23		29.83	36.5	42.7	Lalande 4249 ...	331 2 8.6	-98.5	0 28.0	97 13 56.8	+23.1
24		29.83	36.6	42.1	B.A.C. 784 .....	59 4 52.3	+33.0	5 22.4	9 9 2.4	+33.6
25		29.84	36.6	42.0	B.A.C. 854 .....	312 13 11.1	-268.1	8 41.3	116 5 43.5	+18.9
26		"	36.7	"	$\eta$ Eridani .....	328 48 39.2	-107.6	46 50.1	99 27 34.7	+21.9
27		29.85	35.6	41.7	14 Eridani .....	328 35 40.6	-108.9	33 49.1	99 40 35.7	+21.3
28		"	"	"	66 Arietis .....	0 34 10.0	-33.6	33 33.2	67 40 51.6	+25.0
29		29.86	35.7	41.2	B.A.C. 1121 .....	307 63 30.7	-400.0	56 49.1	120 17 35.7	+17.9
30	Dec. 4	29.77	43.0	48.0	21 Ceti .....	328 45 57.1	-106.2	44 8.3	99 30 16.5	+21.8
31		29.77	42.6	47.9	$\eta$ Ceti .....	327 20 31.2	-112.8	18 35.6	100 55 49.2	+21.6

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on  $5'$  = for Dec. 2,  $+1''$ .9, for Dec. 4,  $+1''$ .9.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Dec. 2,  $30^\circ 0' 2''$ .9, for Dec. 4,  $30^\circ 0' 3''$ .0.

1—5, 11. Very unsteady.

3, 4, 29. Faint.

6—10. Foggy.

8. \* n.f.

15. Nearest division.

26, 31. Unsteady.

31. Dew on the Microscopes.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

No. for Ref.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	°	°		° ' "	"	' "	° ' "	"
1	Dec. 4	29.76	41.6	47.3	B.A.C. 418 .....	313 13 6.7	-244.7	9 0.2	115 5 24.6	+17.8
2	"	"	41.5	"	B.A.C. 504 .....	312 34 18.8	-257.2	29 58.3	115 44 26.5	+17.9
3	"	29.76	41.0	46.8	ζ Ceti .....	327 14 25.6	-113.6	12 28.8	101 1 56.0	+22.0
4	"	"	41.7	"	β Trianguli .....	12 34 8.5	-18.4	33 46.8	55 40 38.0	+32.2
5	"	29.76	41.3	46.1	Lalande 4249 .....	331 2 8.5	-97.2	0 29.1	97 13 55.7	+22.9
6	"	"	41.1	"	25 Arietis .....	347 49 44.5	-53.1	48 48.3	80 25 36.5	+26.4
7	"	29.76	40.9	45.9	B.A.C. 826 .....	348 11 56.1	-52.5	11 1.3	80 3 23.5	+25.9
8	"	"	"	"	Wire(Nad.Obs.)R.	210 0 3.0	.....	.....	.....	.....
9	Dec. 18	29.34	46.3	46.6	20 Arietis .....	3 22 46.2	-28.7	22 16.7	64 52 8.1	+30.6
10	"	29.35	46.0	47.0	σ Ceti .....	322 24 50.4	-138.0	22 30.3	105 51 54.5	+18.6
11	"	"	46.0	"	τ <sup>1</sup> Eridani .....	319 6 53.9	-163.8	4 8.9	109 10 15.9	+17.6
12	"	29.36	45.7	47.0	η Eridani .....	328 48 35.8	-103.9	46 49.3	99 27 35.5	+19.7
13	"	29.36	45.7	47.1	12 Eridani .....	308 47 42.8	-354.6	41 47.4	119 32 37.4	+14.7
14	"	29.36	45.1	47.2	B.A.C. 1073 .....	310 30 33.8	-300.0	25 32.0	117 48 52.8	+14.8
15	"	"	44.2	"	17 Tauri .....	1 55 12.9	-30.7	54 40.3	66 19 44.5	+24.2
16	"	29.37	43.7	46.8	B.A.C. 1229 .....	324 16 2.8	-127.2	13 54.1	104 0 30.7	+16.4
17	"	"	43.9	"	Δ N. L. ....	3 59 34.7	-28.1	68 52.5	64 5 32.3	.....
18	"	"	"	"	B.A.C. 1342 .....	358 44 18.6	-35.0	43 41.3	69 30 43.5	+20.1
19	"	29.36	43.4	46.1	υ <sup>1</sup> Tauri .....	0 44 36.3	-32.3	44 1.8	67 30 23.0	+20.0
20	"	"	"	"	ε <sup>1</sup> Tauri .....	350 28 51.3	-47.5	28 1.3	77 46 23.5	+17.5
21	Dec. 20	"	"	"	Wire(Nad.Obs.)R.	210 0 2.0	.....	.....	.....	.....
22	Dec. 22	29.62	43.7	45.9	54 Andromedæ ...	28 13 24.7	- 1.8	13 22.0	40 1 2.8	+38.2
23	"	29.63	44.0	46.0	B.A.C. 700 .....	34 43 34.8	+ 4.8	43 38.7	33 30 46.1	+37.7
24	"	29.65	43.1	45.9	B.A.C. 1025 .....	6 47 11.2	-25.0	46 44.8	61 27 40.0	+27.4
25	"	"	42.9	"	B.A.C. 1089 .....	25 42 56.2	- 4.4	42 50.7	42 31 34.1	+29.9
26	"	29.64	43.2	45.9	δ Persei .....	25 34 46.5	- 4.5	34 39.6	42 39 45.2	+28.8
27	"	"	43.5	"	α Persei .....	28 31 41.7	- 1.5	31 38.6	39 42 46.2	+27.7
28	"	29.64	43.7	45.9	B.A.C. 1286 .....	39 43 59.0	+10.0	44 6.3	28 30 18.5	+26.6
29	"	"	44.2	"	B.A.C. 1379 .....	58 29 35.1	+31.5	30 4.1	9 44 20.7	+25.2
30	"	29.63	44.0	46.1	ε Aurigæ .....	21 51 24.1	- 8.3	51 14.1	46 23 10.7	+18.2

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^{\circ} 14' 24''$ .8.

Correction for Runs on 5' = for Dec. 18, +  $2''$ .2, for Dec. 22, +  $2''$ .0.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Dec. 18,  $30^{\circ} 0' 2''$ .0, for Dec. 22,  $30^{\circ} 0' 2''$ .3.

3. Clouds passing.

5—7. Cloudy.

Dec. 18. An unfavourable windy night. Microscopes damp, and walls and pillars wet.

10, 11, 13. Unsteady.

12, 20, 28. Nearest division.

17. Semi-diameter, -  $16' 33''$ .4; Parallax, +  $26' 21''$ .5.

Dec. 22. The night very cloudy and windy.

23. Faint. Another star nf.

29. Faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^{\circ} 14' 24''$ .8.

No. for Red.	Day of Observation.	Barometer.	Thermom.		Name of Object.	Circle Reading (Mean of Microscopes) reduced to Meridian.	Correction to Circle Reading for Refraction.	Min. and Sec. of Circle Reading finally corrected. *	Geocentric N.P.D. of Centre of Object.	Correction to Mean N.P.D. 1858, Jan. 1.
			Ext.	Int.						
	1858.	In.	o	o		o ' "	"	' "	o ' "	"
1	Dec. 24	29.40	38.3	44.1	$\omega^3$ Tauri .....	358 28 58.5	- 35.8	28 19.7	69 46 5.1	+20.6
2		29.42	37.9	43.0	$\tau^1$ Tauri .....	0 55 18.1	- 32.5	54 43.1	67 19 41.7	+18.4
3		29.42	38.4	42.6	$\epsilon$ Aurigæ .....	21 51 23.6	- 8.4	51 13.1	46 23 11.7	+18.5
4	Dec. 27	29.38	38.2	43.0	6 Trianguli (1st) .	7 53 30.2	- 23.7	53 4.7	60 21 20.1	+32.1
5		29.38	39.0	42.6	11 Trianguli .....	9 25 3.6	- 21.9	24 38.7	58 49 46.1	+31.8
6		29.38	39.4	42.2	B.A.C. 795 .....	49 15 23.3	+ 20.3	15 40.7	18 58 44.1	+39.2
7		"	"	"	Radcliffe 780 .....	62 17 46.0	+ 36.8	18 20.7	5 56 4.1	+39.4
8		29.38	39.5	42.1	Radcliffe 827 .....	62 31 45.8	+ 37.1	32 20.5	5 42 4.3	+38.5
9		"	40.2	"	Groom. 2213 S.P.	73 44 12.3	+ 55.5	45 4.5	5 30 39.7	+36.8
10		29.40	40.1	42.0	Groom. 642 .....	64 25 41.7	+ 39.8	26 18.7	3 48 6.1	+35.0
11		.....	...	...	Wire(Nad.Obs.)R.	210 0 3.0	.....	.....	.....	.....
12	Dec. 29	29.95	38.1	42.1	7 Arietis .....	1 8 16.7	- 32.8	7 41.9	67 6 42.9	+30.6
13		"	"	"	Lalande 3825 ..	19 6 20.3	- 11.5	6 6.2	49 8 18.6	+35.5
14		29.95	37.9	41.3	B.A.C. 725 .....	34 50 36.7	+ 5.0	50 38.9	33 23 45.9	+38.3
15		29.96	37.4	41.0	B.A.C. 810 .....	348 17 10.6	- 53.1	16 15.2	79 58 9.6	+24.9
16		29.97	37.0	40.7	Radcliffe 827 .....	62 31 42.1	+ 38.0	32 17.6	5 42 7.2	+39.0
17		29.96	37.0	40.6	$\tau^3$ Eridani .....	314 7 33.0	- 232.7	3 38.1	114 10 46.7	+14.2
18		"	"	"	60 Arietis .....	3 24 17.6	- 29.8	23 44.6	64 50 40.2	+26.7
19		"	37.3	"	B.A.C. 1096 .....	355 37 22.1	- 40.8	36 39.0	72 37 45.8	+23.7
20		29.98	37.0	40.1	B.A.C. 1155 .....	0 57 24.3	- 33.1	56 48.9	67 17 35.9	+24.1
21		29.97	37.2	40.1	B.A.C. 1222 .....	310 14 30.9	- 319.4	9 8.4	118 5 16.4	+11.8
22		"	"	"	50 Persei .....	15 54 56.5	- 15.0	54 38.5	52 19 46.3	+25.0
23		29.98	36.5	40.0	51 Tauri .....	359 29 7.4	- 35.2	28 28.9	68 45 55.9	+20.7
24		"	"	"	B.A.C. 1391 .....	354 8 21.3	- 43.2	7 36.1	74 6 48.7	+18.4
25		29.99	36.6	40.0	* R.A. 4 <sup>h</sup> 32 <sup>m</sup> 7 <sup>s</sup> .	323 24 8.9	- 137.2	21 48.4	104 52 36.4	+12.0
26		"	"	"	B.A.C. 1542 .....	352 25 24.3	- 46.0	24 35.4	75 49 49.4	+15.0
27		30.00	36.2	39.8	B.A.C. 1615 .....	307 57 17.2	- 406.1	50 28.8	120 23 56.0	+ 8.1
28		"	"	"	18 Camelopardali.	35 21 29.2	+ 5.6	21 32.2	32 52 52.6	+16.1
29		30.00	36.0	39.6	$\theta^1$ Orionis (1st)...	332 47 5.3	- 92.6	45 30.3	95 28 54.5	+ 6.7

Increasing Circle Readings correspond to decreasing North Polar Distances.

Assumed Colatitude =  $38^\circ 14' 24''$ .8.

Correction for Runs on 5' = for Dec. 24, +1''9, for Dec. 27, +1''7, for Dec. 29, +1''5.

Zenith Point = (App. S.Z.D. + Circle Reading) = for Dec. 24,  $30^\circ 0' 2''$ .6, for Dec. 27,  $30^\circ 0' 3''$ .0, for Dec. 29,  $30^\circ 0' 3''$ .0.

1. Faint. Nearest division. 8. Double companion np. 14. Cloudy.  
17. Very unsteady. 21. Faint. 27. Very faint.

\* The results of this column are corrected for Runs, Index Correction, and Refraction, for all objects; for the Moon, Parallax and Semi-diameter have been applied in addition.

To reduce to Geoc. N.P.D. of centre, subtract circle-reading thus corrected from  $68^\circ 14' 24''$ .8.

**TABLE OF NADIR POINTS,**  
**AS FOUND BY OBSERVATIONS OF THE REFLECTED IMAGE**  
**OF THE HORIZONTAL WIRE; AND OF THE**  
**CORRECTION FOR RUNS**  
**OF THE MICROSCOPE-MICROMETERS OF THE MERIDIAN CIRCLE,**  
**DURING THE YEAR 1858.**

Day and Hour, 1858.	Temperature.		Concluded Reading for the Nadir Point.	Correc- tion for Runs of Four Micro- scopes.	Day and Hour, 1858.	Temperature.		Concluded Reading for the Nadir Point.	Correc- tion for Runs of Four Micro- scopes.
	Air.	Instr.				Air.	Instr.		
d. h.	o	o	o / "	"	d. h.	o	o	o / "	"
Jan. 2. 9	38.0	41.2	210 0	1.95	July 3. 10	51.0	57.0	210 0	4.55
9. 8	41.0	44.0		2.97	10. 10	60.1	61.7		5.50
16. 9	38.1	41.1		3.55	17. 11	57.0	64.9		6.63
23. 10	25.9	33.4		1.97	24. 10	63.6	66.6		6.43
Feb. 1. 10	28.9	32.0		2.27	31. 10	55.6	65.2		6.43
6. 9	38.0	44.1		2.34	Aug. 7. 11	56.9	62.0		6.38
13. 11	40.5	40.1		2.52	21. 9	60.4	63.0		5.80
20. 9	31.4	35.0		2.70	28. 11	45.1	52.9		5.97
27. 10	30.4	33.4		1.54	Sept. 4. 9	59.0	62.6		5.98
Mar. 6. 11	29.6	32.5		1.28	11. 9	62.6	64.7		6.13
20. 9	45.6	50.3		2.93	18. 11	46.6	53.5		5.50
27. 9	46.9	50.5		4.44	25. 9	53.5	58.8		5.34
Apr. 3. 10	47.0	49.0		3.45	Oct. 2. 9	54.0	56.7		5.71
10. 11	33.0	37.8		2.62	9. 8	46.6	50.3		5.44
17. 11	43.0	49.3		4.32	16. 8	54.9	57.4		6.12
24. 11	47.5	52.4		3.88	23. 9	49.2	53.5		5.74
May 1. 10	41.8	49.8		3.44	30. 11	34.7	40.5		2.66
8. 11	43.5	47.3		4.17	Nov. 6. 9	39.5	44.7		3.72
15. 10	47.4	53.9		3.77	13. 9	40.6	42.0		2.70
22. 11	48.9	53.3		4.12	20. 9	30.7	37.8		2.44
29. 10	55.6	59.5		5.29	Dec. 4. 10	41.2	44.7		3.00
June 5. 11	56.4	62.0		5.82	11. 9	36.9	38.2		2.12
12. 12	54.9	60.1		5.92	20. 8	40.2	42.6		2.00
19. 10	62.0	66.7		6.45	27. 10	40.3	42.0		2.99
26. 10	58.1	61.9		6.25					

Jan. 9. The microscopes damp and the readings uncertain.

Jan. 23, & Feb. 1. The reflected image of the wire very unsteady.

Jan. 30, Nov. 27, & Dec. 18. The Observations of Runs and Nadir Point could not be made, on account of the wet state of the instrument and microscopes.

Feb. 6. The reflected image very steady and well-defined; the observation good.

March 6. The wind very high, and the image consequently very unsteady.

March 27. The observation very satisfactory.

April 3. The eye tired.

May 15. The image very steady and distinct, though there was much wind.

August 21. The wind very high; the image unsteady.

Aug. 28, & Nov. 6. The image unsteady.

Dec. 4. Dew on the glasses of the microscopes; the observation very unsatisfactory.

Dec. 27. The image unsteady and ill-defined.

# SEPARATE RESULTS FOR MEAN N.P.D. OF STARS

OBSERVED AT THE

RADCLIFFE OBSERVATORY, OXFORD,

IN THE YEAR 1858.

α Andromedæ.			38 Piscium (2d).			47 Piscium.			B.A.C. 138.		
	Mag.	° /		Mag.	° /		Mag.	° /		Mag.	° /
		61. 41			81. 54			72. 53			95. 19
Nov. 18	...	" 2	Oct. 30	...	53. 6	Nov. 23	...	37. 6	Dec. 2	7. 0	" 4
22	...	34. 9	Radcliffe 56.			11 Ceti.			B.A.C. 147.		
23	...	35. 3			1. 20			91. 54			91. 17
B.A.C. 6.			Oct. 28	8. 3	" 9	Oct. 11	7. 5	" 4	Oct. 28	6. 0	" 3
		11. 4	d Piscium.			Groombridge 67.			30	6. 0?	10. 9
Nov. 9	6. 7?	29. 5						4. 27	Nov. 22	6. 0	10. 1
10	...	29. 7	Sept. 22	...	82. 35	Oct. 28	8. 0	" 9	B.A.C. 154.		
11	6. 5	29. 4	Oct. 11	...	56. 8	Nov. 11	8. 3	58. 0			8. 17
B.A.C. 10.			Nov. 11	5. 3	57. 1	12 Ceti.			Nov. 9	...	" 9
Nov. 2	6. 5?	" 6	18	6. 0	54. 1			94. 44	δ Andromedæ.		
		43. 6	9 Ceti.			Nov. 9	...	35. 3			59. 54
6 Ceti.					102. 59	Radcliffe 104.			Nov. 18	...	59. 8
Oct. 8	5. 7	106. 14	Nov. 2	6. 0	58. 9			4. 4	B.A.C. 174.		
		" 3	9	...	61. 2	Nov. 10	...	" 4			95. 7
Radcliffe 28.			10	...	59. 6	18	...	30. 9	Oct. 20	...	" 5
		4. 3	Dec. 2	6. 3	60. 2	13 Cassiopeiæ.			Nov. 17	...	53. 8
Sept. 22	8. 3	49. 8	45 Piscium.					24. 15	B.A.C. 178.		
Radcliffe 33.					83. 5	Nov. 22	6. 3	" 0			66. 8
		4. 7	Sept. 22	...	" 39. 7	Radcliffe 134.			Dec. 2	6. 5	58. 1
Nov. 9	9. 0?	" 5. 3	B.A.C. 97.					6. 6	B.A.C. 191.		
38 Piscium (1st).					87. 58	Oct. 20	...	27. 0			94. 38
Nov. 23	...	81. 54	Oct. 30	7. 0?	" 18. 4	Nov. 2	7. 5	25. 5	Nov. 11	...	" 2
		56. 3									

$\beta$ Ceti.			Radcliffe 253.			$\eta$ Ceti.			$\psi$ Cassiopeia.		
	Mag.	$\frac{0}{108.45}$		Mag.	$\frac{0}{1.46}$		Mag.	$\frac{0}{100.56}$		Mag.	$\frac{0}{22.36}$
Nov. 22	...	60.1	Nov. 2	9.3	11.5	Dec. 4	4.0	10.8	Nov. 8	...	45.6
23	...	59.7							9	...	48.5
B.A.C. 204.			2 Ursæ Minoris.			32 Cassiopeia.			10	...	47.1
		90.31			4.30		S. P.		B.A.C. 418.		
Oct. 23	...	22.7	Nov. 18	5.0	27.9	May 20	...	15.8			115.5
28	6.7	20.2	B.A.C. 270.			$\theta$ Cassiopeia.			Nov. 2	6.5	43.9
Nov. 9	...	21.1			83.55			35.36	Dec. 4	6.0?	42.4
61 Piscium.			Nov. 17	...	26.2	Nov. 2	...	24.3	$\theta^1$ Ceti.		
		69.51	23	...	29.6						98.55
Nov. 2	7.0	3.6	Groombridge 175.			B.A.C. 341.			Nov. 17	...	1.1
18	7.0	3.0			2.29			75.4	95 Piscium.		
$\eta^1$ Cassiopeia.			Nov. 9	...	44.4	Nov. 9	...	56.3			85.22
		32.56	Groombridge 195.			45 Andromeda.			Dec. 2	7.3	48.2
Nov. 10	...	19.7			3.36			53.1	B.A.C. 443.		
Dec. 2	...	18.0	Nov. 22	6.0	49.9	Dec. 2	6.0	55.6			20.42
$\delta$ Piscium.			Dec. 2	6.5	49.0	B.A.C. 352.			Oct. 28	7.0	51.3
		83.11	$\epsilon$ Piscium.					45.25	B.A.C. 444.		
Oct. 20	...	19.4			82.52	Nov. 23	...	8.9			22.19
$\phi^2$ Ceti.			Nov. 17	...	30.0	$\zeta^1$ Piscium.			Nov. 22	...	24.6
		101.24	18	...	29.1			83.10	* R.A. 1 <sup>h</sup> 23 <sup>m</sup> 15 <sup>s</sup> .		
Oct. 30	...	34.6	B.A.C. 290.			Nov. 10	...	35.0			87.45
20 Ceti.					36.33	17	...	34.1	Nov. 18	9.5	50.1
		91.54	Nov. 10	...	23.9	18	...	36.2	B.A.C. 452.		
Nov. 9	...	55.8	25 Ceti.			B.A.C. 378.					116.56
22	5.0	56.4			95.35			13.10	Nov. 8	...	31.5
Groombridge 144.			Oct. 28	5.7	47.7	Dec. 2	6.5	57.3	11	...	32.0
		1.44	$\psi^2$ Piscium.			39 Ceti.			R.H.C. 227.		
Oct. 28	6.5	26.0			70.1			93.14			5.39
Nov. 11	6.0?	25.7	Nov. 11	6.0	1.6	Nov. 11	5.7	58.9	Nov. 8	...	30.3
21 Ceti.			30 Ceti.			47 Andromeda.			Dec. 2	9.3?	31.9
		99.30			100.32			53.1			
Oct. 20	...	36.5	Nov. 18	6.5	47.5	Nov. 18	6.0	39.9			
Dec. 4	6.5	38.3									

50 Andromedæ.			Lalande 3310.			B.A.C. 629.			η Arietia.		
	Mag.	0 /		Mag.	0 /		Mag.	0 /		Mag.	0 /
		49. 18			64. 14			79. 40			69. 27
Nov. 17	...	22. 6	Dec. 2	7. 3	5. 5	Nov. 8	...	2. 6	Jan. 4	...	27. 9
B.A.C. 490.			Lalande 3405.			B.A.C. 641.			20 Arietis.		
		78. 38			66. 35			82. 56			64. 52
Nov. 22	...	48. 6	Nov. 9	...	13. 5	Nov. 22	7. 0	49. 7	Dec. 18	...	38. 7
B.A.C. 504.			ζ Ceti.			Lalande 3825.			B.A.C. 700.		
		115. 44			101. 2			49. 8			33. 31
Nov. 11	...	47. 5	Nov. 8	...	19. 3	Dec. 29	7. 0	54. 1	Nov. 23	...	25. 8
Dec. 4	6. 0?	44. 4	11	...	19. 8	κ Arietis.			Dec. 22	...	23. 8
τ Andromedæ.			23	...	18. 4			68. 1	Lalande 4249.		
		50. 8	Dec. 4	3. 0	18. 0	Nov. 23	...	49. 2			97. 14
Nov. 9	...	37. 8	γ Arietis (North).			58 Andromedæ.			Nov. 18	7. 0	20. 5
B.A.C. 509.					71. 24			52. 48	Dec. 2	7. 0	19. 9
		30. 10	Nov. 18	4. 7	5. 1	Nov. 18	5. 0	58. 9	4	...	18. 6
Nov. 10	...	16. 6	β Arietia.			β Trianguli.			67 Ceti.		
B.A.C. 510.					69. 53			55. 41			97. 4
		48. 6	Nov. 10	...	12. 8	Nov. 10	...	8. 6	Nov. 8	...	41. 9
Nov. 23	...	2. 7	7 Arietis.			Dec. 4	...	10. 2	B.A.C. 708.		
54 Andromedæ.					67. 7	16 Arietis.					88. 54
		40. 1	Nov. 22	6. 3	13. 1			64. 44	Nov. 22	...	56. 8
Dec. 22	...	41. 0	Dec. 29	6. 5	13. 5	Nov. 8	...	5. 3	B.A.C. 725.		
Radcliffe 500.			ι Arietis.			9	...	4. 4			33. 24
		2. 12			72. 52	B.A.C. 669.			Dec. 29	8. 0	24. 2
Nov. 8	...	23. 3	Nov. 17	...	37. 2			69. 17	κ Fornacis.		
τ Ceti.			18	5. 0	37. 8	Nov. 11	...	38. 5			114. 27
		106. 41	Radcliffe 559.			64 Ceti.			Jan. 4	...	44. 3
Nov. 22	4. 0	9. 5			1. 29			82. 5	11 Trianguli.		
B.A.C. 544.			Dec. 2	7. 7	55. 3	Nov. 17	...	46. 9			60. 21
		52. 45	B.A.C. 612.			6 Trianguli (1st).			Dec. 27	...	52. 2
Nov. 17	...	20. 7			84. 39			60. 21			
			Nov. 9	...	19. 6	Dec. 27	...	52. 2			
			11	6. 0?	19. 8						

B.A.C. 755.			Radcliffe 756.			41 Arietis.			$\rho^1$ Eridani.		
	Mag.	$\circ$ / 80. 4		Mag.	$\circ$ / 4. 43		Mag.	$\circ$ / 63. 19		Mag.	$\circ$ / 98. 13
Nov. 17	...	32. 7	Jan. 11	9. 0	24. 7	Nov. 22	...	38. 7	Nov. 23	...	31. 6
18	6. 5	32. 6									
25 Arietis.			12 Persei.			17 Persei.			$\alpha$ Ceti.		
		80. 26			50. 24			55. 31			86. 28
Dec. 4	...	" 2. 9	Jan. 4	...	33. 4	Nov. 18	5. 5	37. 1	Jan. 4	...	10. 9
27 Arietis.			B.A.C. 826.			Radcliffe 827.			$\tau^3$ Eridani.		
		72. 55			80. 3			5. 42			114. 11
Jan. 4	7. 0	33. 4	Dec. 4	...	49. 4	Jan. 13	...	46. 0	Dec. 29	...	" 0. 9
75 Ceti.			$\theta$ Persei.			$\rho^3$ Arietis.			B.A.C. 955.		
		91. 39			41. 22			72. 32			16. 9
Nov. 22	...	51. 2	Nov. 18	...	31. 3	Nov. 18	6. 0	44. 1	Jan. 13	...	10. 7
$\sigma$ Ceti.			36 Arietis.			Radcliffe 836.			Groombridge 595.		
		105. 52			72. 50			5. 34			5. 36
Dec. 18	...	" 13. 1	Nov. 23	...	22. 9	Jan. 11	8. 5	" 14. 5	Nov. 22	...	13. 3
B.A.C. 784.			38 Arietis.			$\eta$ Eridani.			$\kappa$ Persei.		
		9. 9			78. 9			99. 27			45. 41
Jan. 4	6. 0	35. 6	Jan. 12	5. 5	16. 4	Jan. 12	...	60. 1	Jan. 4	...	" 1. 9
Dec. 2	6. 0	36. 0	Radcliffe 780.			Dec. 2	...	56. 6	B.A.C. 976.		
B.A.C. 789.					5. 56	18	...	55. 2			69. 47
		83. 8	Dec. 27	...	43. 5	47 Arietis.			Jan. 11	7. 7	" 2. 4
Nov. 23	...	56. 6	B.A.C. 854.			Jan. 4	5. 7	10. 5	12	...	5. 0
77 Ceti.					116. 6	$\epsilon$ Arietis.			B.A.C. 979.		
		98. 28	Dec. 2	6. 0	" 2. 4			69. 13			12. 47
Nov. 17	...	53. 9	$\tau^1$ Eridani.			Nov. 22	...	49. 2	Jan. 13	...	" 39. 8
B.A.C. 795.					109. 10	51 Arietis.			12 Eridani.		
		18. 59	Dec. 18	...	33. 5			63. 56	Jan. 12	...	" 57. 0
Dec. 27	...	" 23. 3	$\pi$ Arietis.			Jan. 14	6. 7	" 50. 4	19	...	57. 6
B.A.C. 810.					73. 7				Dec. 18	...	52. 1
		79. 58	Jan. 4	...	" 41. 5						
Dec. 29	...	34. 5	11	5. 5	41. 8						



B.A.C. 1001.			B.A.C. 1073.			B.A.C. 1127.			32 Eridani (1st).		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		24. 52			117. 49			23. 14			93. 22
Jan. 4	...	17. 8	Dec. 18	...	7. 6	Jan. 18	...	58. 1	Jan. 14	...	34. 4
									23	...	32. 6
14 Eridani.			Groombridge 642.			8 Persei.			32 Eridani (2d).		
		99. 40			3. 48			42. 40	<i>Direct.</i>		
Jan. 13	5. 7	58. 6	Jan. 4	...	43. 3	Dec. 22	...	14. 0			93. 22
14	...	58. 5	11	5. 7	43. 5	22 Eridani.			Jan. 18	...	40. 9
Dec. 2	6. 0	57. 0	Dec. 27	6. 3	41. 1				<i>Reflexion.</i>		
B.A.C. 1025.			B.A.C. 1089.					95. 40	Jan. 11	...	39. 3
		61. 28			42. 32	Jan. 13	6. 0	22. 1	B.A.C. 1222.		
Dec. 22	...	7. 4	Dec. 22	...	4. 0	14 Tauri.					118. 5
60 Arietis.			6 Tauri.					70. 47	Jan. 13	...	31. 7
		64. 51			81. 6	Jan. 14	6. 7	14. 8	Dec. 29	...	28. 2
Jan. 11	7. 3	5. 0	Jan. 13	6. 5	33. 4	23	7. 0	12. 7	B.A.C. 1229.		
Dec. 29	7. 0	6. 9	19	...	33. 4	17 Tauri.					104. 0
B.A.C. 1035.			B.A.C. 1096.					66. 20	Dec. 18	7. 3	47. 1
		41. 17			72. 38	Dec. 18	...	8. 7	λ Tauri.		
Jan. 4	...	53. 5	Dec. 29	6. 7	9. 5	B.A.C. 1155.			<i>Reflexion.</i>		
Lalande 6247.			B.A.C. 1110.					67. 18	Jan. 4	...	77. 54
		73. 47			89. 52	Dec. 29	7. 3	0. 0			51. 6
Jan. 12	8. 7	14. 8	Jan. 14	6. 7	43. 5	28 Tauri.			19 Eridani.		
13	8. 5	11. 7	10 Tauri.					66. 18			114. 25
64 Arietis.			<i>Reflexion.</i>			Jan. 13	5. 0	1. 1	Jan. 28	...	17. 5
		65. 46			90. 3	27	5. 7	2. 1	ν Tauri.		
Jan. 19	...	56. 3	Jan. 4	...	4. 9	27 Tauri.					84. 24
B.A.C. 1055.			B.A.C. 1121.			<i>Reflexion.</i>			Jan. 18	...	28. 6
		68. 27			120. 17			66. 23	23	5. 0	25. 2
Jan. 14	7. 5	57. 7	Dec. 2	...	53. 6	Jan. 4	...	1. 8	B.A.C. 1247.		
66 Arietis.			21 Eridani.			A Persei.					6. 33
		67. 41			96. 5			39. 43	Jan. 27	6. 0	8. 6
Dec. 2	6. 0	16. 6	Jan. 11	5. 7	3. 4	Dec. 22	...	13. 9	* R. A. 3 <sup>h</sup> 58 <sup>m</sup> 0 <sup>s</sup> .		
									Jan. 14	9. 5?	70. 30
											50. 6

50 Persei.			55 Tauri.			θ <sup>2</sup> Tauri.			89 Tauri.		
	Mag.	o /		Mag.	o /	<i>Reflexion.</i>				Mag.	o /
		52. 20			73. 49						74. 15
Dec. 29	5.7	11.3	Jan. 14	7.7	25.9		Mag.	o /	Jan. 21	...	18.1
						Jan. 4	...	50.2	25	...	17.6
						11	...	49.7			
ω <sup>1</sup> Tauri.			57 Tauri.			B.A.C. 1379.			c <sup>1</sup> Tauri.		
<i>Direct.</i>					76. 18						77. 46
Jan. 23	6.3	10.0	Jan. 28	5.7	39.4				Jan. 14	5.0	40.5
									Feb. 1	4.7	38.0
<i>Reflexion.</i>			58 Tauri.			Jan. 12	7.5	47.5	Dec. 18	...	41.0
Jan. 11	...	6.9			75. 14	Dec. 22	...	45.9			
			Jan. 25	...	55.2				* R.A. 4 <sup>h</sup> 32 <sup>m</sup> 7 <sup>s</sup> .		
B.A.C. 1286.			27	6.0	55.8	B.A.C. 1391.					104. 52
		28. 30	B.A.C. 1335.					74. 7	Dec. 29	...	48.4
Jan. 18	...	44.1			76. 28	Jan. 19	...	7.5			
Dec. 22	...	45.1			"	Dec. 29	...	7.1	τ <sup>1</sup> Tauri.		
R.A. 4 <sup>h</sup> 6 <sup>m</sup> 30 <sup>s</sup> .			Jan. 12	6.5	44.8						67. 20
		43. 34	60 Tauri.			Piazzi iv. 96.			Dec. 24	...	0.1
Jan. 27	8.0	51.7			76. 15			53. 33			
48 Tauri.			Jan. 23	6.3	43.4	Jan. 23	7.5	56.9	τ <sup>2</sup> Tauri.		
		74. 57	B.A.C. 1342.			25	...	57.8			67. 19
Jan. 23	6.7	29.2			69. 31				Jan. 25	...	8.9
ε <sup>2</sup> Eridani.			Dec. 18	...	3.6	83 Tauri.			B.A.C. 1450.		
		97. 52	B.A.C. 1347.					76. 35			114. 45
Jan. 21	...	35.5			65. 55	Jan. 21	6.0	16.0	Jan. 23	6.7	48.3
ω <sup>2</sup> Tauri.			Jan. 18	...	47.5	B.A.C. 1417.			4 Camelopardali.		
		69. 46	δ <sup>2</sup> Tauri.					70. 24			33. 30
Jan. 19	...	28.1	<i>Reflexion.</i>			Jan. 27	7.3	53.9	Jan. 11	5.7	2.2
Dec. 24	...	25.7			72. 53				12	...	2.9
51 Tauri.			Jan. 13	...	18.8	Aldebaran.			μ Eridani.		
		68. 46	ν <sup>1</sup> Tauri.			<i>Reflexion.</i>					
Dec. 29	6.0	16.6			67. 30			73. 46			93. 31
γ Tauri.			Dec. 18	...	43.0	Jan. 4	...	46.7	Jan. 4	...	7.3
<i>Reflexion.</i>			76 Tauri.			13	...	47.4	13	...	6.5
		74. 43			75. 34	B.A.C. 1428.			B.A.C. 1471.		
Jan. 4	...	8.9	Jan. 14	7.0	44.1			14. 19			117. 50
11	...	7.6	28	...	43.1	Jan. 23	6.5	36.8	Jan. 27	...	35.9

58 Eridani.			(R) Leporis.			16 Orionis.			r Orionis.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		107. 11			105. 1			80. 21			97. 0
Jan. 21	...	51. 8	Jan. 13	7. 7	26. 4	Feb. 1	6. 0	24. 3	Feb. 1	3. 7	4. 1
			Feb. 1	7. 3	22. 5						
B.A.C. 1490.			64 Eridani.			λ Eridani.			B.A.C. 1661.		
		53. 36			102. 45			98. 56			86. 34
Jan. 11	7. 3	7. 3				Jan. 4	...	22. 3	Jan. 4	8. 0	15. 3
23	7. 5	6. 0	Jan. 25	...	0. 5	9	...	22. 5			
25	...	5. 3									
B.A.C. 1496.			B.A.C. 1549.			12 Aurigæ.			B.A.C. 1670.		
		15. 57			16. 14			43. 45			114. 54
Feb. 1	6. 7?	34. 5	Jan. 26	6. 0	54. 3	Jan. 1	...	4. 8	Jan. 18	...	51. 7
						4	...	2. 4			
B.A.C. 1510.			ε Tauri.			B.A.C. 1615.			111 Tauri.		
		16. 9	<i>Direct.</i>					120. 24			72. 45
Feb. 4	6. 3	5. 7	Jan. 9	...	59. 6	Feb. 4	...	2. 4	Jan. 23	5. 0	6. 8
			<i>Reflexion.</i>			Dec. 29	...	4. 1	25	...	8. 4
π <sup>4</sup> Orionis.			Jan. 4	...	58. 8				Feb. 8	6. 0	6. 8
		80. 4				Capella.			β Tauri.		
Jan. 12	...	42. 0	Radcliffe 1377.					44. 9			61. 30
14	...	43. 1			4. 28	Feb. 17	...	6. 1	Feb. 22	...	60. 4
			Jan. 21	7. 5	9. 5	18	...	5. 0	24	...	58. 8
B.A.C. 1522.			23	7. 3	13. 1	μ Leporis.			B.A.C. 1678.		
Jan. 21	6. 5	59. 3	Feb. 4	7. 3	13. 3			106. 22			91. 0
23	7. 0	58. 5				Jan. 11	3. 0	36. 5	Feb. 4	6. 7	12. 2
26	7. 0	58. 5	11 Orionis.			13	...	37. 5	18	7. 0	10. 2
					74. 47						
62 Eridani.			Jan. 27	...	52. 7	B.A.C. 1610.			29 Orionis.		
		95. 23	m Tauri.					11. 50			97. 56
Jan. 27	...	57. 8			71. 32	Jan. 23	7. 5	29. 3	Jan. 21	5. 0	32. 0
			Jan. 11	5. 6	57. 9						
			18	...	58. 4	16 Aurigæ.			B.A.C. 1696.		
ε Aurigæ.			ε Leporis.					56. 46			87. 11
		46. 23			112. 33	Jan. 26	5. 5	51. 8	Feb. 1	7. 7	30. 5
Jan. 28	...	29. 6				Feb. 8	5. 5	51. 1			
Dec. 22	...	28. 9	Jan. 25	...	54. 1	n Tauri.			18 Camelopardali.		
24	...	30. 2						68. 3			32. 53
B.A.C. 1542.			13 Orionis.			Jan. 9	6. 0	15. 9	Jan. 4	...	7. 8
		75. 50			80. 42	21	...	15. 2	Dec. 29	6. 7	8. 7
Dec. 29	7. 0	4. 4	Jan. 12	...	19. 5						

B.A.C. 1708.			22 Camelopardali.			o Aurigæ.			137 Tauri.		
	Mag.	o / 102. 1		Mag.	o / 33. 43		Mag.	o / 40. 14		Mag.	o / 75. 52
Jan. 11	...	" 24. 3	Jan. 11	7. 0	37. 9	Jan. 21	5. 7	28. 3	Feb. 22	6. 0	3. 7
			18	...	36. 7	Feb. 8	6. 5	29. 1			
			25	...	36. 5	18	6. 7	28. 4			
B.A.C. 1706.			S. P.			S. P.			136 Tauri.		
Feb. 8	7. 0	15. 3	July 28	...	-39. 9	June 28	...	-26. 2	Jan. 25	...	62. 25
		" 34. 3							26	5. 5	31. 9
											32. 5
B.A.C. 1713.			21 Camelopardali.			B.A.C. 1808.			B.A.C. 1865.		
		116. 42			28. 8			75. 0			120. 39
Jan. 9	...	" 18. 7	Feb. 20	...	26. 6	Jan. 18	...	9. 4	Feb. 4	...	54. 5
						Feb. 22	7. 3	8. 6	18	...	43. 6
χ Aurigæ.			θ <sup>1</sup> Orionis (1st).			128 Tauri.			25	6. 0?	53. 7
		57. 55			95. 29			73. 58	B.A.C. 1874.		
Feb. 22	...	" 3. 0	Feb. 4	7. 7.	" 2. 6	Jan. 25	...	47. 4	Jan. 1	...	23. 0
24	5. 7	2. 3	8	7. 7	2. 4	26	...	48. 1	4	7. 5	27. 5
			19	...	3. 1	Feb. 25	7. 3	45. 4	13	...	28. 1
Radcliffe 1474.			25	7. 5	3. 0	B.A.C. 1829.			S. P.		
		2. 41	Dec. 29	...	1. 2				June 28	...	-26. 0
Jan. 13	...	" 56. 9	θ <sup>2</sup> Orionis (1st).			Jan. 4	7. 5	65. 22			
						11	7. 0	" 9. 2	χ <sup>1</sup> Orionis.		
					95. 30	23	7. 3	7. 5	Jan. 11	...	69. 45
July 21	8. 0	-57. 3	Jan. 23	6. 0	47. 2	Lalande 10912.			Feb. 24	5. 3	14. 1
δ Orionis.			26 Aurigæ (2d).					65. 23			13. 3
		90. 24			59. 35	Feb. 19	8. 0	40. 7	B.A.C. 1881.		
Jan. 23	...	28. 7	Jan. 9	...	" 46. 8	24	8. 5	39. 2			23. 7
26	...	28. 7	Feb. 1	5. 7	47. 2	κ Orionis.			Feb. 19	...	6. 5
ν Orionis.			ζ Orionis.					99. 43	δ Aurigæ.		
		97. 24			92. 1	Jan. 28	...	" 25. 6			35. 43
Jan. 1	...	" 33. 9	Feb. 9	...	" 16. 5	Feb. 9	...	22. 9	Feb. 26	...	" 55. 6
4	...	34. 5	B.A.C. 1796.			B.A.C. 1850.			β Aurigæ.		
12	...	36. 8			71. 5			57. 55			45. 4
28	4. 5	36. 5	Jan. 1	8. 3?	" 7. 3	Jan. 9	6. 7	" 15. 0	Jan. 28	...	" 19. 5
α Leporis.			4	8. 0	8. 1	21	7. 0	14. 7	Feb. 8	...	18. 3
		107. 55	11	7. 7	8. 0	Feb. 1	7. 5	15. 6	9	...	18. 2
Jan. 21	...	" 36. 7	28	7. 5	11. 5	8	7. 0	15. 2			
Feb. 18	...	33. 6									

139 Tauri.			36 Camelopardali.			R.H.C. 889.			B.A.C. 2072.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		64. 4			24. 15			3. 55			120. 52
Jan. 25	...	" 3. 0	Jan. 13	...	" 38. 8	Feb. 18	8. 7	" 36. 3	Feb. 8	...	" 22. 1
			Feb. 22	5. 5	40. 0	24	9. 3	36. 4			
θ Aurigæ.			ν Orionis.			25	9. 5	36. 2	Lalande 12274.		
						26	9. 3	37. 6			
Jan. 23	...	52. 48			75. 13	B.A.C. 2014.			Jan. 18	7. 5	52. 9
		" 6. 1	Jan. 9	...	" 7. 1				25	...	53. 5
			Feb. 9	...	4. 8			54. 48	R.H.C. 920.		
59 Orionis.			41 Aurigæ (1st).			Jan. 9	7. 0	" 28. 4			
		88. 10			41. 15	3 Lyncis.					3. 58
Jan. 9	6. 5	" 53. 1	Feb. 8	8. 0	" 46. 2				Feb. 18	9. 0	" 11. 4
Feb. 24	6. 5	50. 1	41 Aurigæ (2d).			Jan. 13	...	" 53. 9	25	9. 5	14. 0
					41. 15	75 Orionis.			6 Lyncis.		
38 Aurigæ.			Feb. 27	...	" 56. 0			80. 0			31. 44
		47. 5	η Geminorum.			Feb. 9	...	" 35. 0	Jan. 13	...	" 20. 8
Jan. 4	7. 0	" 20. 5			67. 27	45 Aurigæ.			20	6. 5	19. 9
Feb. 18	7. 0	20. 8	Jan. 1	...	" 19. 3			36. 29	B.A.C. 2076.		
χ <sup>s</sup> Orionis.			Feb. 1	4. 3	18. 9	Jan. 21	...	" 20. 4			55. 25
		70. 18	κ Aurigæ.			ζ Canis Majoris.			Jan. 21	8. 0	" 29. 9
Jan. 1	...	" 38. 7			60. 27			120. 0	48 Aurigæ.		
Feb. 8	6. 3	38. 3	Feb. 22	...	" 12. 2	Feb. 22	...	" 11. 9			59. 25
ι Geminorum.			71 Orionis.			25	...	7. 4	Feb. 22	5. 3	" 25. 6
		66. 43			70. 47	26	...	10. 5	78 Orionis.		
Jan. 11	...	" 60. 0	Jan. 11	...	" 58. 1	27	...	6. 7			90. 11
Feb. 4	4. 5	60. 7	42 Aurigæ.			β Canis Majoris.			Feb. 26	5. 7	" 39. 2
26	4. 7	57. 2			43. 32			107. 53	B.A.C. 2095.		
66 Orionis.			Feb. 4	7. 0	" 2. 3	Jan. 9	...	" 19. 8			10. 17
		85. 50	2 Lyncis.			B.A.C. 2070.			Feb. 24	5. 5	" 39. 3
Jan. 18	6. 0	" 11. 7			30. 56			78. 43	27	5. 7	38. 6
Feb. 24	6. 5	11. 9	Feb. 8	5. 0	" 37. 4	Jan. 11	8. 5	" 37. 5	9 Lyncis.		
2 Geminorum.			72 Orionis.			27	...	36. 7			33. 30
		66. 21			73. 49	28	8. 3?	36. 9	Feb. 1	7. 7?	" 29. 5
Jan. 4	7. 5	" 8. 0	Jan. 18	5. 7	" 3. 1				4	7. 3	28. 2
28	7. 3?	8. 6									
Feb. 25	7. 0	8. 3									

8 Lyncis.			56 Aurigæ (2d).			15 Lyncis.			ζ Geminorum.		
	Mag.	0 / 28. 24		Mag.	0 / 46. 16		Mag.	0 / 31. 23		Mag.	0 / 69. 13
Feb. 19	6.0	3.6	Jan. 18	...	20.2	Feb. 18	5.0	49.8	Jan. 25	...	31.1
10 Lyncis.			Feb. 18	10.0	15.1	38 Geminorum.			B.A.C. 2311.		
		28. 24	25	9.7	17.6			76. 38			94. 3
Jan. 11	7.0	41.8	ξ Geminorum.			Feb. 26	5.5	42.6	Feb. 24	7.5	40.9
Feb. 8	7.7	41.7			76. 57	B.A.C. 2266.			25	7.7	42.6
41 Camelopardali.			Feb. 9	...	15.6			118. 20	γ Canis Majoris.		
		27. 57	43 Camelopardali.			Feb. 4	6.0?	55.8			105. 25
Jan. 13	...	42.0			20. 57	8	5.3?	52.5	Feb. 8	4.5	35.2
Feb. 9	...	41.0	Feb. 19	...	15.8	27	...	57.1	(R) Geminorum.		
51 Aurigæ.			S. P.			62 Aurigæ.					67. 4
Jan. 18	...	17.9	Aug. 23	...	16.4	Jan. 11	6.3	28.0	Feb. 4	7.5	52.5
20	6.0	18.9	17 Monocerotis.			20	6.5	24.5	Mar. 8	8.0	51.2
25	...	17.6			81. 48	Feb. 9	...	26.2	B.A.C. 2331.		
Feb. 24	6.0	17.8	Feb. 8	6.0	48.8	19	...	27.3			59. 37
ξ2 Canis Majoris.			B.A.C. 2217.			19 Canis Majoris.			Feb. 20	...	49.2
		112. 51			110. 37			109. 57	τ Geminorum.		
Feb. 25	...	20.2	Jan. 21	7.3	40.1	Feb. 24	4.5?	29.4			59. 31
26	...	15.8	* R.A. 6h 40m 20s.			25	4.7?	31.9	Jan. 26	...	33.9
12 Lyncis (1st).					49. 53	39 Geminorum.			27	...	33.8
Feb. 8	8.5	6.2	Jan. 20	9.0	24.2			63. 44	R.H.C. 1029.		
22	9.0	9.4	59 Aurigæ.			Jan. 26	...	11.7			5. 31
27	...	8.9			50. 57	Mar. 6	6.3	10.6	Feb. 27	7.7	41.6
12 Lyncis (2d).			Jan. 11	6.5	59.1	R.H.C. 1012.			Mar. 6	7.5	42.2
		30. 25	Feb. 22	6.3	58.6			5. 28	δ Canis Majoris.		
Jan. 11	...	15.4	24	6.5	57.6	Jan. 21	9.7	33.8			116. 10
26	...	16.2	60 Aurigæ.			Feb. 22	9.7	32.2	Feb. 8	3.0	13.3
13 Lyncis.					51. 23	B.A.C. 2304.			B.A.C. 2347.		
		32. 41	Jan. 26	...	22.2			80. 39			74. 26
Feb. 24	5.7	21.8	Feb. 25	6.0	22.7	Mar. 5	...	31.0	Feb. 25	7.3	13.0
S. P.			Mar. 5	...	21.5	6	6.5	32.0			
Aug. 9	...	23.0	6	6.0	21.3						

20 Monocerotis.			B.A.C. 2420.			B.A.C. 2489.			{ Radcliffe 2020. } R.H.C. 1123.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		94. 1			120. 32			58. 44			3. 54
Feb. 19	...	10. 1	Feb. 4	...	35. 3	Feb. 22	6. 3	3. 1	Feb. 8	7. 7	27. 0
			27	...	26. 8	Mar. 5	...	3. 1	22	8. 0	26. 1
Piazzii vii. 9.			Mar. 6	...	29. 2	v Geminorum.			25	7. 3	26. 7
		73. 40	i Geminorum.					62. 47	Mar. 8	7. 5	27. 3
Feb. 24	9. 0	55. 3			61. 55	Feb. 24	4. 7	31. 4	B.A.C. 2590.		
Mar. 5	...	52. 4	Feb. 8	4. 5	22. 9	23 Lyncis.					10. 8
52 Geminorum.			18	4. 5	26. 3			32. 35	Feb. 24	5. 0	34. 1
		64. 52	24	4. 0	24. 7	Feb. 8	7. 0	53. 9	Mar. 6	5. 0	32. 4
Feb. 9	...	20. 0	25	4. 5	24. 6	18	7. 3	54. 1	11	...	33. 5
Lalande 14038.			Mar. 5	...	24. 0	25	6. 5	54. 3	Groombridge 1359.		
		67. 47	B.A.C. 2453.			71 Geminorum.					5. 32
Mar. 9	7. 3	26. 9			120. 10			55. 5	Mar. 5	7. 0	48. 0
27 Canis Majoris.			Mar. 8	...	33. 1	Mar. 9	5. 3	37. 7	9	7. 0	48. 5
		116. 6	22 Lyncis.			Radcliffe 1979.			Lalande 15277.		
Feb. 25	4. 0?	38. 3			40. 2			3. 14			114. 36
B.A.C. 2390 (2d).			Feb. 22	5. 7	22. 7	Feb. 4	8. 3	0. 9	Feb. 4	...	38. 3
		16. 39	β Canis Minoris.			Mar. 8	...	2. 3	9 Puppis.		
Feb. 20	...	9. 1			81. 25	B.A.C. 2526.					103. 31
22	8. 3	9. 6	Feb. 9	...	40. 7			84. 26	Feb. 18	6. 0?	26. 7
47 Camelopardali.			ρ Geminorum.			Mar. 11	...	45. 0	25	5. 7	27. 4
		-29. 50			57. 56	22	7. 0	43. 5	B.Z. 270. 165.		
July 29	...	25. 0	Mar. 9	4. 7	12. 2	σ Geminorum.					67. 57
λ Geminorum.			B.A.C. 2470.					60. 46	Mar. 22	9. 0	38. 4
		73. 12			101. 16	Feb. 9	...	36. 8	B.A.C. 2651.		
Feb. 8	4. 7	25. 9	Feb. 25	6. 7	17. 3	* R.A. 7 <sup>h</sup> 34 <sup>m</sup> 31 <sup>s</sup> .			Feb. 8	...	29. 0
Mar. 8	4. 3	24. 4	(S) Canis Minoris.					66. 23	24	...	30. 4
δ Geminorum.					81. 22	Feb. 24	...	23. 9	Mar. 9	...	29. 5
		67. 45	Mar. 6	10. 5	52. 5	Pollux.			R.H.C. 1153.		
Jan. 26	...	37. 3	Castor.					61. 38			5. 33
27	...	36. 8			57. 48	Jan. 27	...	3. 7	Mar. 8	8. 0	52. 1
Feb. 24	...	35. 7	Mar. 11	...	15. 4	Feb. 18	...	4. 1	B.A.C. 2655.		
											119. 57
									Mar. 5	...	18. 9

B.A.C. 2658.			B.A.C. 2734.			Radcliffe 2129.			{ Radcliffe 2162. R.H.C. 1233. }		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		71. 22			57. 6			4. 18			5. 35
Feb. 25	7.5	" 5.8	Mar. 5	7.3	" 0.3	Feb. 25	8.7	" 54.0	Feb. 18	8.0	" 43.9
						Mar. 6	8.7	54.7	Mar. 23	...	43.9
28 Monocerotis.			$\zeta^1$ Cancr.			B.A.C. 2810.			B.A.C. 2883.		
		91. 0	<i>Reflexion.</i>					72. 21			121. 2
Feb. 9	...	" 5.1	Feb. 23	...	71. 55	Mar. 8	7.3	" 24.9	Feb. 16	...	" 55.2
					35.0				Mar. 8	...	51.6
6 Cancr.			$\zeta^2$ Cancr.			{ Lalande 16469. } { Groom. 1437. }			22	...	52.7
<i>Direct.</i>					71. 55			43. 52	B.A.C. 2898.		
Feb. 4	5.0	61. 48	Mar. 11	...	" 45.2	Feb. 16	6.3	" 19.0			116. 21
Mar. 24	6.0	38.8	* R. A. 8h 4m 55s.			18	7.0	19.7	Mar. 9	...	" 21.8
<i>Reflexion.</i>					73. 3	Mar. 5	6.5	19.2	29	...	21.2
Feb. 22	...	38.5	Feb. 16	6.5	" 48.0	25 Cancr.			$\Sigma$ 1263 (1st).		
B.A.C. 2673.			18	6.5	46.4	<i>Reflexion.</i>					47. 47
		87. 16	Mar. 6	6.0	46.7	Feb. 22	...	72. 29	Mar. 5	...	" 12.1
Jan. 28	...	" 43.4	(R) Cancr.					" 20.1	8	8.0?	12.9
Feb. 24	4.7	44.3			77. 50	$v^1$ Cancr (1st).			22	8.7	13.6
Radcliffe 2069.			Feb. 25	7.7	" 25.3			65. 0	$\Sigma$ 1263 (2d).		
		4. 18	Mar. 8	7.7	25.7	Mar. 29	7.0	" 8.3			47. 46
Feb. 18	9.0	" 57.3	22	7.5	26.7	$v^1$ Cancr (2d).			Mar. 23	...	" 48.2
Mar. 6	8.5	57.7	$\beta$ Cancr.					65. 0	29	9.5	49.3
B.A.C. 2703.					80. 22	Mar. 22	8.0	" 2.8	$\gamma$ Cancr.		
		67. 8	Jan. 28	...	" 46.9	27 Cancr.			<i>Direct.</i>		
Feb. 25	7.7	" 19.0	$\chi$ Cancr.					76. 52	Feb. 24	4.0	" 24.6
Mar. 22	7.5	19.5			62. 19	Feb. 24	6.0	" 47.5	25	4.5	24.1
15 Argus.			Mar. 9	5.0	" 33.9	B.A.C. 2828.			<i>Reflexion.</i>		
		113. 53	B.A.C. 2788.					113. 35	Feb. 22	...	26.2
Feb. 8	...	" 51.9			68. 48	Mar. 9	10.0	" 14.0	Radcliffe 2198.		
9	...	55.1	Mar. 23	...	" 27.4	$\eta$ Cancr.					4. 45
$\psi^2$ Cancr.			$\bullet$ 31 Lyncis.					69. 4	Mar. 9	8.5	" 20.5
		64. 3			46. 21	Feb. 24	6.0	" 43.4	$\Sigma$ 1280 (1st).		
Mar. 9	5.7	" 54.0	Feb. 24	5.0	" 36.3	25	5.7	45.2	Feb. 16	8.3?	" 38.2
23	...	54.0	Mar. 24	5.5	35.4				Mar. 6	8.3	37.7
24	6.5	54.3									



190 *Separate Results for Mean N.P.D. of Stars observed*

B.A.C. 3025.			15 Ursæ Majoris.			Radcliffe 2295.			11 Leonis Minoris.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		43.49			37.49			2.15			53.32
Mar. 29	6.5	38.9	Mar. 22	4.3	32.0	Mar. 23	...	11.2	Apr. 3	6.0	58.8
			26	4.5	32.3	29	8.3	13.5			
60 Cancr.			7 Ursæ Majoris.			Apr. 3	8.5	13.5	33 Hydræ.		
<i>Direct.</i>					25.54	83 Cancr.					95.16
Jan. 28	...	77.49	Mar. 29	5.3	46.2			71.41	Mar. 5	...	59.8
		61.6				Feb. 25	6.7	41.7	29	6.0	60.6
<i>Reflexion.</i>			75 Cancr.			Mar. 24	7.0	41.7	Radcliffe 2368.		
Mar. 8	...	59.8			62.47	B.A.C. 3199.					2.45
9	...	62.2	Feb. 22	6.7	8.9	<i>Reflexion.</i>			Mar. 24	8.0	9.1
17 Hydræ (South.)			ξ Cancr.					8.3	12 Leonis.		
		97.25			67.22	Mar. 8	...	10.2	<i>Direct.</i>		
Mar. 22	...	51.8	Mar. 5	...	55.5	41 Lyncis (1st).					63.59
26	...	53.7	24	5.5	57.1			43.46	Mar. 11	...	41.8
(T) Hydræ.			π <sup>1</sup> Cancr.			Mar. 11	...	45.3	17	...	41.7
		98.36			74.26	17	...	43.6	<i>Reflexion.</i>		
Feb. 22	7.7	5.4	Mar. 8	...	5.1	41 Lyncis (2d).			Mar. 8	...	42.6
24	7.7	6.7	Σ 1321 (1st).					43.48	ι Hydræ.		
25	7.7	6.3			36.42	Mar. 5	...	3.3			90.30
ι Ursæ Majoris.			Mar. 9	7.7	29.9	22	7.5	3.7	Apr. 10	4.7	1.1
		41.24	π <sup>2</sup> Cancr.			23 Ursæ Majoris.			ε Leonis.		
Mar. 5	...	14.1			74.28			26.19	<i>Reflexion.</i>		
11	...	13.9	Feb. 25	6.0	17.9	Apr. 10	4.0	14.1	Mar. 9	...	65.34
{ B.A.C. 3059. }			Mar. 11	...	20.0	3 Leonis.					26.8
{ 10 Ursæ Majoris. }			26	...	19.5			81.11	18 Leonis.		
		47.39	20 Ursæ Majoris.			Mar. 24	6.3	39.3			77.32
Feb. 18	...	26.6			29.37	Lalande 18631.			Mar. 5	...	14.5
B.A.C. 3076.			Feb. 24	7.5	25.3			55.49	22	...	16.8
		83.48	Mar. 5	...	25.0	Mar. 26	7.7	49.1	26	6.0	15.3
Feb. 16	6.3	16.5	B.A.C. 3169.			{ R.H.C. 1407. }			15 Leonis Minoris.		
Mar. 23	...	19.7			38.8	{ Radcliffe 2355. }					43.19
ν Cancr.			Mar. 17	...	35.6			6.1	Apr. 3	6.0	12.1
		64.59	22	6.0	35.9	Mar. 23	...	20.6			
Jan. 28	...	28.9									

19 Leonis.			B.A.C. 3452.			$\gamma^1$ Leonis.			48 Leonis.		
	Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /
		77.46			120.12			69.26			82.18
Mar. 23	...	37.3	Apr. 10	6.0?	3.4	Apr. 10	...	28.2	Apr. 21	5.0?	58.7
29	6.7	36.5				17	...	29.4			
$\nu$ Ursæ Majoris.			$\eta$ Leonis.			{ R.H.C. 1540. } { Radcliffe 2483. }			B.A.C. 3629.		
		30.17			72.32			4.52			8.50
Mar. 17	...	44.0	Mar. 17	...	46.6			4.52	Mar. 17	...	5.4
						Mar. 26	7.7	46.3	Apr. 1	...	7.2
$\mu$ Leonis.			Regulus.			B.A.C. 3563.			38 Leonis Minoris.		
Reflexion.					77.20			96.20			51.21
		63.19	Mar. 26	...	24.5	Mar. 17	...	41.6	Apr. 19	...	11.3
Mar. 8	...	34.0	Groombridge 1618.			Apr. 20	6.0	43.9	B.A.C. 3652.		
9	...	33.9				$\mu$ Hydræ.					20.10
Radcliffe 2404.					39.49			106.6	Apr. 22	5.2	57.7
		5.24	Mar. 23	...	45.1	Apr. 1	...	44.4	B.A.C. 3665.		
Apr. 10	6.5	9.2	29	6.5	46.7	B.A.C. 3567.					43.3
			Apr. 1	...	46.5			40.27	Mar. 22	...	4.0
B.A.C. 3393.			34 Leonis.			Mar. 29	6.7	31.6	29	6.0	4.7
		14.33			75.56				Apr. 10	6.0	3.5
Mar. 5	7.5?	47.5	Mar. 9	6.5	42.7	$\beta$ Leonis Minoris.			34 Sextantis.		
$\nu$ Leonis.			15	...	41.6			52.33			85.40
		76.52	B.A.C. 3476.			Apr. 15	...	58.7	Apr. 17	...	33.7
Mar. 26	5.3	45.0			96.37	Radcliffe 2507.			52 Leonis, k.		
29	5.0	46.5	Mar. 11	...	7.5			4.31			75.3
$\pi$ Leonis.			35 Leonis.			Mar. 22	...	10.0	Apr. 22	5.7	22.2
		81.16			65.47	$\rho$ Leonis.			$l$ Leonis.		
Mar. 22	...	32.9	Mar. 17	...	32.4			79.57			78.42
23	...	34.0	39 Leonis.			Mar. 24	4.5?	49.5	Mar. 24	...	14.3
13 Sextantis.					66.10	Apr. 10	4.5	48.1	Apr. 1	...	13.6
		86.6				20	4.5?	48.0	21	...	15.6
Mar. 8	7.0	35.3	Mar. 24	6.3	58.8	23	4.5	48.9	23	5.5	13.2
9	6.5	34.7	B.A.C. 3515.			37 Ursæ Majoris.			$\nu$ Hydræ.		
21 Leonis Minoris.					45.13			32.11			105.27
		54.3			"	Apr. 17	...	15.3	Apr. 19	...	7.2
Mar. 24	5.3	54.6	Apr. 20	6.5	52.9	22	5.5	13.6	20	...	7.0

47 Leonis Minoris.			Radcliffe 2612.			$\delta$ Crateris.			89 Leonis.		
	Mag.	$\circ$ / 55. 12		Mag.	$\circ$ / 3. 35		Mag.	$\circ$ / 104. 0		Mag.	$\circ$ / 86. 9
Mar. 22	...	28. 7	Apr. 19	...	29. 3	Apr. 22	...	37. 4	Apr. 13	...	4. 6
29	6. 5	29. 9	24	7. 3	30. 5				23	5. 5	5. 0
B.A.C. 3741.			$\chi$ Leonis.			B.A.C. 3861.			24	5. 7	5. 0
		55. 44			81. 53			84. 20	$\nu$ Leonis.		
Apr. 22	6. 0	7. 4	Mar. 26	...	50. 7	Apr. 27	...	26. 4			90. 2
55 Leonis.			65 Leonis, $p^3$ .			$\epsilon$ Leonis.			Apr. 15	...	23. 0
		88. 30			87. 16			78. 41	21	...	23. 4
Apr. 10	6. 5	22. 8	Apr. 10	5. 0	25. 8	Apr. 13	...	18. 0	59 Ursæ Majoris.		
17	...	25. 4				$\epsilon$ Crateris.					45. 35
24	6. 3	23. 7	$\beta$ Crateris.					100. 4	Apr. 17	...	15. 5
B.A.C. 3747.					112. 3	Apr. 21	...	51. 8	$\epsilon$ Crateris.		
		11. 28	Apr. 22	4. 0	5. 2	80 Leonis.					102. 25
Apr. 15	...	16. 2	69 Leonis, $p^5$ .					85. 21	Apr. 22	5. 5	13. 5
47 Ursæ Majoris.					89. 17	Mar. 29	7. 0	30. 2	61 Ursæ Majoris.		
		48. 48	Apr. 20	...	50. 8	83 Leonis (2d).					54. 59
Apr. 20	...	44. 3	$\delta$ Leonis.					86. 13	Apr. 1	...	43. 9
21	...	43. 4			68. 41	Apr. 22	7. 7	12. 9	B.A.C. 3971.		
B.A.C. 3764.			Mar. 29	...	55. 2	Radcliffe 2684.					84. 28
		13. 47	Apr. 1	...	53. 2			4. 30	Apr. 19	...	1. 4
Apr. 13	...	45. 1	13	...	52. 9	Apr. 20	...	41. 4	Radcliffe 2738.		
23	7. 3	45. 2	73 Leonis, $h$ .			$\tau$ Leonis.					3. 40
$c$ Leonis.					75. 55			86. 21	Mar. 29	8. 3	48. 1
		83. 8	Apr. 21	...	5. 3	Apr. 23	4. 5	42. 3	Apr. 20	...	46. 3
Mar. 26	...	10. 3	24	5. 7	4. 4		24	4. 7	B.A.C. 3992.		
Apr. 1	...	7. 2	75 Leonis.			58 Ursæ Majoris.					74. 55
Radcliffe 2594.					87. 12			46. 2	Apr. 22	6. 3	37. 4
		1. 35	Apr. 10	5. 3	30. 5	Apr. 1	...	50. 2	May 6	6. 3?	38. 8
Apr. 22	7. 3	27. 8	17	...	32. 8	17	...	50. 8	$\beta$ Leonis.		
Lalande 21185.			B.A.C. 3855.			B.A.C. 3920.					74. 38
		53. 4			94. 17			95. 41	Apr. 13	...	0. 9
Mar. 29	...	47. 4	Apr. 19	...	11. 0			3. 7	21	...	4. 4
Apr. 21	...	46. 3	23	7. 5	10. 0	Apr. 19	...		24	...	2. 6

$\beta$ Virginia.			$\epsilon$ Virginia.			B.A.C. 4130 (2d).			72 Ursæ Majoris.		
	Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /
		87. 26			80. 28			9. 5			34. 3
Apr. 17	...	" 6.9	May 5	...	" 42.5	May 6	...	" 7.4	Apr. 30	...	" 14.7
									May 11	7.3	16.7
B.A.C. 4009.			$\alpha$ Corvi.			9 Comæ.			20 Comæ.		
		120. 2			113. 56			61. 2			68. 19
May 7	6.0?	" 0.0	May 7	5.0	" 10.8	Apr. 21	...	" 56.0	Apr. 21	...	" 0.3
						May 7	6.5	58.3	May 6	6.0	0.5
B.A.C. 4020.			10 Virginia.			7 Virginia.			B.A.C. 4213.		
		92. 59			87. 18			89. 52			102. 36
Apr. 20	...	" 6.9	Apr. 24	...	" 15.3	Apr. 24	...	" 38.2			" 23.8
May 5	...	8.2	May 6	...	14.9				May 8	...	" 23.8
Radcliffe 2774.			B.A.C. 4111.			Groombridge 1871.			B.A.C. 4214.		
		2. 12			11. 46			2. 46			112. 51
Apr. 22	10.5	47.6	Mar. 29	7.5	" 10.7	May 10	6.7	28.9	May 5	5.0?	" 32.3
23	10.0	50.2									
Radcliffe 2775.			B.A.C. 4112.			Groombridge 1884.			$\beta$ Corvi.		
		2. 12			11. 35			S. P.			112. 36
Mar. 29	...	" 54.3	Apr. 19	...	" 41.2			-1. 30	May 7	...	" 39.2
May 6	8.5?	53.8	20	...	41.1	Nov. 22	6.0	49.9			
7	...	54.1									
7 Virginia, $\delta$ .			Radcliffe 2815.			Groombridge 1879.			$\kappa$ Draconis.		
		85. 33			2. 16			5. 50			19. 25
Apr. 21	...	" 12.9	Apr. 22	7.7	" 37.7	May 8	...	" 17.1	Apr. 30	...	" 42.6
			23	7.7	37.4				May 11	...	42.8
* R.A. 11 <sup>h</sup> 55 <sup>m</sup> 3 <sup>s</sup> .			Groombridge 1860.			W.B. xii. 276.			24 Comæ (2d).		
		46. 4			5. 42			100. 49			70. 50
Apr. 15	...	" 7.0	May 7	7.7	" 28.1	Apr. 22	6.0	21.3	Apr. 20	...	" 26.8
19	...	6.0	8	...	28.8	23	6.0	20.3			
			10	8.0	27.0						
B.A.C. 4059.			$\delta$ Ursæ Majoris.			B.A.C. 4184.			6 Draconis.		
		46. 6			32. 10			65. 17			19. 11
Apr. 13	...	" 17.0	Apr. 13	...	" 40.4	Apr. 13	...	" 4.6	Apr. 19	...	" 42.9
			15	...	40.4	19	...	4.6			
						20	...	5.6			
Groombridge 1850.			B.A.C. 4130 (1st).			Groombridge 1892.			$\chi$ Virginia.		
		3. 37			9. 5			5. 47	Mar. 29	...	" 48.8
May 8	6.7	34.6	May 5	8.3	" 19.7	May 7	7.7	" 4.9	Apr. 21	...	49.2
						8	8.3	4.6	May 8	...	48.5
									10	5.0	48.6

* R.A. 12 <sup>h</sup> 32 <sup>m</sup> 29 <sup>s</sup> .			ε Ursæ Majoris.			B.A.C. 4393.			B.A.C. 4462.		
	Mag.	0 / 20.41		Mag.	0 / 33.16		Mag.	0 / 61.40		Mag.	0 / 84.25
Apr. 22	10.3	10.4	Apr. 22	...	5.4	May 11	6.5	53.3	May 3	7.3	35.4
23	10.0	8.9	May 10	...	6.5				18	7.3	33.0
γ Virginis (North).			δ Virginis.			Radcliffe 2967.			66 Virginis.		
		90.40			85.49			3.21			94.25
May 5	4.0	11.9	Apr. 21	...	49.9	May 3	8.3	4.5	May 7	6.3	14.7
7	...	10.8				19	7.7	5.2	22	5.7	13.6
Groombridge 1923.			* R.A. 12 <sup>h</sup> 49 <sup>m</sup> 3 <sup>s</sup> .			α Comæ.			Spica.		
		5.34			20.57			71.43			100.25
May 3	7.5	36.4	May 8	...	25.7	May 18	...	5.9	Mar. 29	...	9.1
11	7.5	36.0	11	9.5	28.1				May 1	...	7.5
7 Draconis.			12 Can. Venat. (1st).			18 Can. Venat.			12	...	9.1
		22.26			50.55			48.27	ζ <sup>2</sup> Ursæ Majoris.		
Apr. 19	...	0.0	Apr. 20	...	4.6	Mar. 29	...	5.5			34.20
B.A.C. 4306.			12 Can. Venat. (2d).			Apr. 30	...	3.8	May 10	5.0	7.7
		96.51			50.54	54 Virginis (1st).			B.A.C. 4496.		
Mar. 29	...	29.8	May 19	...	50.5			108.4			90.5
Apr. 20	...	28.9	Groombridge 1947.			May 8	...	14.0	May 6	...	12.6
* R.A. 12 <sup>h</sup> 43 <sup>m</sup> 0 <sup>s</sup> .					20.27	22	6.5	15.1	B.A.C. 4500.		
		20.52	May 3	8.0	27.4	Groombridge 1971.					107.59
Apr. 23	10.7	18.7	5	8.3	28.4			21.56	May 3	6.5?	31.8
May 7	10.5	25.2	22	7.7	28.1	May 3	7.0	15.7	5	6.7?	32.1
32 Comæ.			78 Ursæ Majoris.			5	7.7	15.0	(R) Hydræ.		
		72.9			32.52	10	7.0	14.2			112.29
Apr. 30	...	9.4	Apr. 30	...	2.1	59 Virginis.			May 7	6.0?	41.3
May 3	7.0	9.5	ε Virginis.					79.49	B.A.C. 4502.		
33 Comæ.					78.16	May 7	6.0	57.6			90.37
		72.7	Apr. 23	...	34.8	20 Can. Venat.			May 19	6.5	32.8
May 6	...	1.9	May 10	...	34.8			48.40	W.B. xiii. 375.		
38 Virginis.			18	...	34.5	May 6	...	42.0			97.7
		92.46	B.A.C. 4392.			Groombridge 2006.			Apr. 30	...	43.3
May 18	6.0	49.4			27.11			1.35	B.A.C. 4515.		
			May 6	...	46.4	May 11	7.3	25.3			91.35
			7	6.5	46.9	19	7.5	25.2	May 18	7.5	43.3

λ Virginis.			84 Ursæ Majoris.			B.A.C. 4700.			γ Boötis.		
	Mag.	° ' "		Mag.	° ' "		Mag.	° ' "		Mag.	° ' "
		99. 25			34. 51			105. 37			51. 4
Mar. 29	...	56. 2	May 3	6. 0	22. 8	May 25	...	48. 4	May 19	...	8. 8
			20	...	22. 6						
B.A.C. 4527.			Oeltz. Arg. 14009.			B.A.C. 4717.			{ Radcliffe 3250. } R.H.C. 2148. }		
		10. 37			10. 24			92. 38			1. 56
May 11	5. 7	20. 9	May 19	9. 3	53. 9	May 12	...	16. 6	May 18	8. 5	26. 1
20	...	20. 4							25	9. 0?	26. 1
24 Can. Venat.			* R.A. 13 <sup>h</sup> 46 <sup>m</sup> 29 <sup>s</sup> .			B.A.C. 4723.			June 7	9. 3?	28. 0
		40. 15			23. 18			60. 13	33 Boötis.		
May 1	...	24. 9	May 11	8. 0	58. 4	May 18	7. 3	44. 4			44. 58
10	5. 0	24. 7	18	8. 0	58. 4				June 1	...	49. 7
* R.A. 13 <sup>h</sup> 28 <sup>m</sup> 41 <sup>s</sup> .			B.A.C. 4643.			κ <sup>1</sup> Boötis.			B.A.C. 4845.		
		9. 10			6. 32			37. 32			35. 21
May 22	8. 0	28. 0	May 6	...	8. 2	May 11	7. 0	47. 5	June 5	...	42. 7
B.A.C. 4555.			Lalande 25653.			κ <sup>2</sup> Boötis.			π <sup>1</sup> Boötis.		
		36. 40			57. 16			37. 32			72. 58
May 3	7. 0	54. 3	May 22	6. 5	20. 7	May 19	...	40. 8	June 12	6. 0	13. 7
7	7. 3	55. 4	86 Ursæ Majoris.			18 Boötis.			B.A.C. 4881.		
82 Ursæ Majoris.					35. 34			76. 20			44. 12
		36. 21	May 7	5. 5	19. 4	May 25	6. 0	19. 8	June 1	...	43. 8
May 19	6. 0	34. 4	τ Virginis.			B.A.C. 4769.			R.H.C. 2206.		
84 Virginis, o.					87. 45			83. 31			5. 55
		85. 44	May 5	...	59. 8	May 12	...	51. 2	May 18	9. 3	25. 5
May 6	...	30. 1	12	...	59. 1				8 Libræ.		
11	6. 0	30. 5	Piazzi xiii. 291.			B.A.C. 4781.					105. 24
B.A.C. 4577.					98. 21			116. 12	June 7	6. 0	15. 7
		24. 27	May 11	8. 5	54. 9	May 19	...	48. 1	11 Libræ.		
May 18	6. 5	34. 8	19	8. 5	55. 8	θ Boötis.					91. 42
22	5. 7	34. 9	25	8. 7	60. 1			37. 29	June 12	...	17. 1
Rümker 4459.			Oeltz. Arg. 14219.			May 25	...	29. 5	* R.A. 14 <sup>h</sup> 45 <sup>m</sup> 10 <sup>s</sup> .		
		82. 56			18. 20	June 1	...	29. 0			101. 47
May 5	7. 0?	2. 0	May 18	7. 7	13. 9	ρ Boötis.			June 14	...	52. 2
7	6. 5	2. 0	B.A.C. 4689.					59. 0			
10	6. 5	0. 6			20. 38			11. 2			
12	...	1. 0	May 10	...	14. 4	June 12	...	11. 2			

6 Ursæ Minoris.			ψ Boötis.			{ R.H.C. 2283. Radcliffe 3354. }			B.A.C. 5117.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		17.26			62.29			5.25			114.37
May 28	...	31.9	June 9	...	47.4	June 1	...	27.5	May 25	...	37.1
31	...	29.8	ι <sup>1</sup> Boötis.			11	8.3	27.4	June 11	...	39.0
June 5	...	30.8				12	8.3	27.6	γ Libræ.		
B.A.C. 4920.					41.47	15	8.0	26.8			
		115.42	June 14	...	31.9	R.H.C. 2288.					104.18
June 12	7.0?	28.0	9 Ursæ Minoris.					5.30	June 10	...	48.4
B.A.C. 4923 (2d).					17.40	June 9	...	58.6	δ Serpentis (South).		
		110.46	June 7	6.5	49.1	B.A.C. 5064.					78.59
June 1	...	19.9	47 Boötis.					39.16	June 7	...	6.6
16 Libræ.					41.17	June 7	7.7	12.4	R.H.C. 2333.		
		93.45	May 28	...	55.8	11 Ursæ Minoris.					1.27
May 25	...	57.0	ι <sup>1</sup> Libræ.					17.39	June 12	9.3	8.5
18 Libræ.					109.15	June 12	5.0	40.8	18	9.0	6.9
		100.34	May 25	...	3.0	η Coronæ.			B.A.C. 5163.		
June 7	5.5	14.5	23 Libræ.					59.11			117.10
9	...	14.2			114.46	June 21	...	48.9	June 23	...	34.7
B.A.C. 4937.			June 9	...	15.1	μ Boötis.			B.A.C. 5167.		
		39.47	11	7.0	15.3			52.7			118.50
June 14	...	21.8	12	7.0	12.7	June 10	...	22.3	June 1	...	19.2
* R.A. 14 <sup>h</sup> 55 <sup>m</sup> 11 <sup>s</sup> .			ι <sup>2</sup> Libræ.			11	5.0	21.7	11	...	17.4
		99.49			109.6	14	...	20.0	15	7.0?	17.8
June 12	7.5?	47.8	June 1	...	36.8	ι Draconis.			ζ <sup>1</sup> Coronæ.		
20 Libræ.			Groombridge 2213.					30.32			52.53
		114.43			5.30	June 15	...	6.8	June 9	...	59.3
May 25	...	13.9	June 10	...	2.2	Groombridge 2283.			21	...	60.5
B.A.C. 4962.			S. P.					2.13	ζ <sup>2</sup> Coronæ.		
		62.21	β Libræ.			June 1	...	47.3			52.54
June 1	...	40.8			98.51	9	...	47.9	June 22	...	3.4
Groombridge 2210.			June 14	...	22.3	12	7.0	48.2	R.H.C. 2342.		
		3.28	δ Boötis.			B.A.C. 5116.					5.38
June 11	7.3	2.2			56.9			27.13	June 14	7.5	53.7
			May 28	...	11.2	June 14	...	57.5			

ψ Serpentis.			α Herculis.			φ Herculis.			19 Ursæ Minoris.		
	Mag.	° /		Mag.	° /		Mag.	° /		Mag.	° /
		87. 1			46. 26			44. 41			13. 46
June 17	6.3	34.7	June 9	...	44.0	May 27	...	28.3	June 25	...	3.6
B.A.C. 5215.			18	6.3	44.5	June 7	4.7	26.6	γ Herculis.		
			π Scorpii.			14 Herculis.					
		118. 20			115. 42			45. 47	June 22	...	70. 30
June 12	...	49.1	June 12	...	6.4	June 24	...	59.8	B.A.C. 5465.		
23	...	47.4	δ Scorpii.			* R.A. 16 <sup>h</sup> 6 <sup>m</sup> 33 <sup>s</sup> .					
δ Scorpii.					112. 12				June 14	7.0	59.1
		115. 18	June 22	...	51.2	106. 21			18	7.0	57.0
June 9	...	55.7	23	...	49.8	June 14	10.7	54.3	ψ Ophiuchi.		
22	...	56.5	49 Libræ.			{ R.H.C. 2424. }					
B.A.C. 5249.					106. 6	{ Radcliffe 3522. }					109. 42
		26. 57	June 25	5.5	42.1	5. 58			May 27	...	4.7
June 10	...	40.7	B.A.C. 5318.			41.2			June 28	5.0	4.3
						May 28					
α Scorpii.					118. 32	49 Serpentis (North).			B.A.C. 5487.		
		114. 53	June 14	7.0	10.1	76. 5					118. 57
June 14	4.7	56.8	ρ Coronæ.			June 29			June 29	7.0	49.5
					56. 15	76. 5			Antares.		
3 Scorpii.			June 10	...	56.1	June 22			June 23	...	116. 6
		114. 49	11	...	55.9	28.3			24	...	45.2
June 11	6.5	9.4	θ Draconis.			18 Scorpii.					
					31. 3	97. 59			η Ursæ Minoris.		
39 Serpentis.			June 9	...	16.2	June 28			June 12	5.0	10.6
		76. 21	21	...	15.5	5.5			η Draconis.		
June 21	...	23.8	28	...	16.2	45.9			June 17	...	28. 9
ρ Scorpii.			B.A.C. 5346.			σ Coronæ.			50.6		
		118. 47			117. 20	55. 46			R.H.C. 2463.		
June 22	...	44.0	June 12	...	46.8	June 9			June 15	9.7	25.4
23	...	43.6	18	6.5	45.1	...			25	9.7	28.8
{ R.H.C. 2380. }			25	7.0	46.2	B.A.C. 5453.					
{ Radcliffe 3475. }			13 Scorpii, c <sup>2</sup> .			23. 16					
		4. 42			117. 33	13.8					
June 7	7.0	52.5	June 11	...	13.9	24					
17	7.0	52.8				30					
						14.6					
						14.6					



198 *Separate Results for Mean N.P.D. of Stars observed*

<b><math>\beta</math> Herculis.</b>			<b>R.H.C. 2501.</b>			<b>28 Ophiuchi.</b>			{ B.A.C. 5813. 30 Scorpii. }		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		68. 11			6. 0			115. 29			116. 20
June 28	...	53. 1	June 18	7. 0	1. 4	July 1	6. 7	25. 1	June 29	6. 7	12. 0
			22	...	1. 0						
			28	7. 3	2. 2						
<b><math>\tau</math> Scorpii.</b>			<b>Oeltz. Arg. 16517.</b>			<b>31 Ophiuchi.</b>			<b>B.A.C. 5815.</b>		
		117. 55						115. 26			115. 8
June 24	...	2. 2				June 22	...	20. 1	June 25	6. 5	29. 4
29	...	5. 0			34. 25	July 14	6. 5	17. 9			
			June 11	...	40. 6						
<b>12 Ophiuchi.</b>			15	7. 3	39. 6	<b><math>\epsilon</math> Herculis.</b>			<b><math>\xi</math> Ophiuchi.</b>		
		92. 1	25	7. 3	40. 4			54. 22			110. 57
June 12	5. 0	5. 7	30	...	40. 9	May 28	...	58. 5	July 14	5. 3	23. 3
14	5. 0	4. 9				June 29	6. 5	58. 4			
<b>B.A.C. 5560.</b>			<b>* R.A. 16<sup>h</sup> 45<sup>m</sup> 49<sup>s</sup>.</b>			<b>(R) Ophiuchi.</b>			<b><math>\epsilon</math> Herculis.</b>		
		28. 52			115. 34						52. 33
June 18	5. 5	43. 2	May 27	...	30. 2			105. 53	June 15	...	27. 6
28	6. 0	41. 9	June 29	7. 5?	31. 1	May 27	...	58. 4			
			July 1	7. 5?	29. 2				<b>B.A.C. 5853.</b>		
<b>R.H.C. 2494.</b>			<b>R.H.C. 2517.</b>			<b><math>\epsilon</math> Ursæ Minoris.</b>					40. 9
		1. 32			3. 29			7. 44	June 11	...	18. 2
May 28	8. 5?	54. 7	May 28	8. 3	24. 0	June 11	...	9. 6	July 1	7. 0	17. 7
July 1	...	53. 3	June 24	...	25. 1						
<b>38 Herculis.</b>			<b>W. B. xvi. 962.</b>			<b>7 Ophiuchi.</b>			<b>8 Ophiuchi.</b>		
		84. 51						105. 32			114. 51
June 11	...	1. 1			102. 58	June 28	...	42. 5	May 27	...	11. 7
22	...	2. 1	June 15	8. 3?	36. 1				28	...	14. 5
30	...	0. 5	25	9. 0?	37. 5	<b>63 Herculis.</b>			June 24	...	12. 1
<b>B.A.C. 5595.</b>			<b>26 Ophiuchi.</b>					65. 35	25	...	10. 3
		116. 32			114. 46	June 15	6. 3	9. 4	28	...	13. 1
June 25	6. 3?	1. 3	June 28	6. 0	4. 5	July 1	7. 0	8. 3	<b>B.A.C. 5858.</b>		
<b><math>\zeta</math> Herculis.</b>			<b>B.A.C. 5720.</b>			<b>Groombridge 2423.</b>					114. 57
		58. 8			103. 20			28. 39	July 17	6. 7	24. 0
June 24	...	15. 9	June 11	...	26. 8	June 11	...	46. 3	21	7. 0?	23. 1
<b>B.A.C. 5607.</b>			<b><math>\lambda^1</math> Draconis.</b>			30	...	45. 7	<b>Radcliffe 3750.</b>		
		118. 34			24. 38	<b><math>A^1</math> Ophiuchi.</b>					0. 41
June 29	7. 5?	27. 6	June 30	...	54. 0			116. 23	June 11	...	48. 0
						May 27	...	21. 1	15	8. 3	48. 8
									July 1	8. 3	48. 2

b Ophiuchi.			$\beta$ Ophiuchi.			B.A.C. 6059.			B.A.C. 6132.		
	Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /
		114. 2			85. 22			116. 44			115. 29
June 30	...	23. 7	July 29	...	10. 8	July 19	7. 3?	31. 8	July 30	7. 3	17. 4
									Aug. 5	6. 7	18. 1
d Ophiuchi.			29 Draconis.			Radcliffe 3798.			100 Hercules (North).		
		119. 44			15. 41			3. 1			
June 25	...	5. 6	July 26	7. 0	14. 4	July 26	...	42. 2			63. 55
						30	8. 5	43. 5	July 29	6. 7	0. 9
73 Hercules.			84 Hercules.			4 Sagittarii.			12 Sagittarii.		
		66. 54			65. 36			113. 47			113. 8
July 14	6. 0	17. 5	July 14	6. 3	27. 1			"	July 13	...	49. 7
						June 25	...	55. 7	17	6. 7	50. 9
$\beta$ Draconis.			Lalande 32461.			5 Sagittarii.			19	6. 7	49. 0
		37. 35			84. 10			114. 16	$\mu^1$ Sagittarii.		
June 11	...	30. 1	July 28	...	3. 5	July 13	...	"			111. 5
July 13	...	30. 7				29	7. 0?	4. 9	Aug. 19	...	31. 6
$\nu^1$ Draconis.			$\mu$ Hercules.			$\gamma$ Draconis.			B.A.C. 6184.		
		34. 43			62. 11			38. 29			33. 45
July 14	5. 0	3. 9	June 11	...	37. 7	July 19	...	34. 8	July 21	7. 3	50. 8
26	5. 0	5. 5	87 Hercules.			30	...	35. 0	28	...	51. 2
					64. 19	Aug. 5	...	33. 6	30	7. 5	53. 0
$\nu^2$ Draconis.			July 19	6. 0	36. 2	$\gamma^2$ Sagittarii.			Aug. 5	7. 7	51. 3
		34. 43	29	6. 5	38. 0			120. 25	B.A.C. 6185.		
July 19	5. 0	46. 5	B.A.C. 6030.			June 28	...	19. 7			35. 45
					70. 41	$\psi^2$ Draconis.			June 25	...	17. 1
27 Draconis, f.			July 3	6. 3	45. 0			17. 58	July 14	6. 0	16. 4
		21. 46	13	...	45. 5	July 14	5. 7	57. 6	Aug. 3	6. 0	16. 2
June 25	4. 7	31. 4	30	6. 7	46. 7	70 Ophiuchi (2d).			7	...	17. 0
29	...	29. 4	30 Draconis.					87. 27	B.A.C. 6199.		
July 3	4. 7	28. 8			39. 11	July 19	6. 3	51. 0			115. 39
28	...	30. 3	July 1	5. 5	1. 6	21	6. 0	53. 3	Aug. 6	6. 3	10. 6
i Hercules.			14	5. 5	0. 9	B.A.C. 6124.			40 Draconis.		
		43. 54	28	5. 7	0. 8			98. 19			10. 1
June 11	...	59. 3	63 Ophiuchi.			July 28	6. 0	52. 5	July 26	...	23. 5
15	...	59. 7			114. 51						
B.A.C. 5988.			July 21	6. 0	16. 3	B.A.C. 6124.			40 Draconis.		
		65. 24	B.A.C. 6124.					98. 19			
July 19	6. 7	50. 7	July 28	6. 0	52. 5			52. 5	July 26	...	23. 5

41 Draconis.			B.A.C. 6288.			B.A.C. 6336.			$\zeta^2$ Lyrae.		
	Mag.	$\circ$ / 10. 1		Mag.	$\circ$ / 18. 33		Mag.	$\circ$ / 111. 30		Mag.	$\circ$ / 52. 33
July 19	5.5	" 11.1	July 14	6.7	" 13.3	July 29	6.3	" 38.4	Aug. 6	6.0	" 6.7
29	6.0	12.3				Aug. 6	6.0	41.7			
$\delta$ Sagittarii.			Radcliffe 3989.			7	...	41.4	B.A.C. 6396.		
		119. 53			1. 45	B.A.C. 6338.					117. 16
June 25	...	" 1.5	Aug. 7	7.7	" 29.1			115. 32	Aug. 3	7.5	" 48.7
B.A.C. 6218.			Radcliffe 3969.			July 19	...	" 16.4	B.A.C. 6408.		
		49. 7			2. 35	B.A.C. 6347.					117. 19
Aug. 7	...	" 0.9	July 17	8.0	" 44.5			111. 9	July 19	7.5?	" 28.8
Radcliffe 3900.			B.A.C. 6292.			Aug. 20	6.0	" 54.2	$\beta^1$ Lyrae.		
		5. 36			108. 59	* R.A. 18 <sup>h</sup> 32 <sup>m</sup> 6 <sup>s</sup> .					56. 47
Aug. 5	8.3	" 24.3	July 19	7.0?	" 41.8			51. 35	July 29	...	" 59.9
108 Herculis.			Aug. 5	6.5	" 42.2	Aug. 5	7.7	" 52.0	$\beta^2$ Lyrae.		
		60. 12	$\chi$ Draconis.			B.A.C. 6368.					56. 48
July 13	...	" 21.1			17. 19			34. 53	Aug. 9	7.5	" 39.0
17	6.0	21.1	July 26	...	" 50.4	July 17	7.5	" 6.1	$\nu^1$ Sagittarii.		
21	6.0	21.0	Aug. 6	4.5	49.1	26	...	5.4			112. 54
B.A.C. 6245.			B.A.C. 6304.			B.A.C. 6369.			July 21	5.0	" 55.8
		72. 14			114. 12			115. 8	$\sigma$ Sagittarii.		
July 19	5.7	" 31.1	Aug. 3	6.7	" 31.4	July 21	6.0	" 56.0			116. 28
Aug. 3	5.5	30.6	42 Draconis.			Aug. 3	5.0	" 54.8	Aug. 20	3.0	" 6.9
Radcliffe 3921.					24. 31	$\phi$ Sagittarii.			B.A.C. 6447.		
		4. 19	July 21	5.7	" 28.2			117. 7			106. 32
July 29	7.7	" 49.4	Aug. 19	...	" 27.9	Aug. 19	...	" 56.2	July 30	5.7	" 45.3
30	7.5	48.8	25 Sagittarii.			20	4.0	" 55.8	$\theta^1$ Serpentina.		
109 Herculis.					114. 19	B.A.C. 6374.					85. 58
		68. 17	July 13	...	" 32.9			117. 38	July 26	...	" 39.5
July 28	...	" 30.1	30	6.5	" 35.9	July 19	7.0	" 34.4	$\theta^2$ Serpentina.		
$\lambda$ Sagittarii.			1 Aquilæ.			29	7.0	" 35.9			85. 58
		115. 29			98. 20	30	7.3	" 34.1	July 19	5.0	" 44.9
June 25	...	" 43.2	July 28	...	" 22.4	$\epsilon^2$ Lyrae (North).					
			Aug. 9	5.0	" 23.3			50. 31			
						July 14	5.0	" 59.7			

13 Lyræ.			(R) Aquilæ.			24 Aquilæ.			α Vulpeculæ.		
	Mag.	° /		Mag.	° /		Mag.	° /		Mag.	° /
		46. 14			81. 58			89. 54			65. 37
Aug. 3	4.7	20.5	July 29	7.0	55.6	Aug. 3	6.5	58.6	Aug. 3	...	11.3
5	4.3	19.6	Aug. 3	7.0	55.2	27	6.5	59.7	5	4.5	10.6
6	4.5	20.6							Sept. 1	...	10.3
γ Lyræ.			R.H.C. 2882.			δ Draconis.			8 Vulpeculæ.		
		57.30			3. 28			22. 35			65. 31
Aug. 20	...	9.8	Aug. 20	7.0	32.0	July 28	...	18.6	July 30	5.5	16.7
B.A.C. 6490.			B.A.C. 6547.			f Aquilæ.			β² Cygni.		
		115. 2			61. 35			95. 40			62. 19
July 29	6.0	17.5	July 17	6.0	31.5	July 17	5.0	40.5	July 29	6.0	49.4
Aug. 9	6.0	17.9	26	...	31.3	30	5.5	40.4			
R.H.C. 2859.			B.A.C. 6563.			χ¹ Sagittarii.			α² Cygni.		
		5. 31			13. 9			114. 46			38. 34
July 30	8.7	3.4	Sept. 1	6.5	18.2	Aug. 9	5.5	48.9	Aug. 9	5.0	16.4
						25	5.7	46.6			
S. P.			B.A.C. 6562.			b Aquilæ.			h¹ Sagittarii.		
Feb. 18	8.7	-1.2						78. 21			115. 1
						Aug. 28	...	22.4	Aug. 25	6.3	34.2
B.A.C. 6505.			July 30	5.7?	27.1	δ Aquilæ.			h² Sagittarii.		
		115. 26	Aug. 9	6.5	26.5			87. 9			115. 11
July 19	6.7?	8.8	ψ Sagittarii.			July 28	...	53.2	Aug. 20	5.0?	34.2
21	7.0	10.2				29	...	54.1			
						Sept. 1	...	53.5	B.A.C. 6712.		
16 Lyræ.			July 28	...	49.5	B.A.C. 6652.					31.42
		43. 15	Aug. 28	...	50.1			70. 0	July 17	6.7	3.4
Aug. 6	6.0	53.5	* R.A. 19 <sup>h</sup> 9 <sup>m</sup> 15 <sup>s</sup> .			July 17	6.3	19.9	Aug. 6	6.0	4.8
23	...	52.3							19	...	4.3
τ Sagittarii.						B.A.C. 6657.			Aug. 28	...	4.3
			Aug. 6	7.0	31.5			65. 20	42 Aquilæ.		
Aug. 5	4.0	117.52	7	7.0	29.9	Aug. 6	6.5	28.2			94. 57
		24.6	d Sagittarii.			19	...	28.3	Aug. 23	6.3	38.5
λ Aquilæ.						B.A.C. 6666.			B.A.C. 6723.		
			Aug. 19	...	109. 12			117. 16			39. 3
Aug. 19	...	95. 5	23	...	7.7	Aug. 20	6.0	18.9	Aug. 30	...	59.3
		33.1	Sept. 1	4.5	8.7	23	6.0?	18.5			

202 *Separate Results for Mean N.P.D. of Stars observed*

53 Sagittarii.			17 Cygni.			11 Sagittæ.			69 Draconia.		
	Mag.	0 /		Mag.	0 /		Mag.	0 /		Mag.	0 /
		113.44			56.36			73.35			13.55
July 29	6.7	48.1	Aug. 27	...	2.8	July 26	...	24.8	Aug. 27	...	1.9
B.A.C. 6727.			R.H.C. 2989.			Aug. 30	6.0	25.5	b <sup>2</sup> Cygni.		
		113.45			4.12	R.H.C. 3015.					53.34
July 30	6.0	1.7	Sept. 1	8.0	51.5			3.22	Sept. 1	...	35.1
θ Cygni.			ο Aquilæ.			Aug. 28	...	15.1	λ Ursæ Minoris.		
		40.6			79.56	Sept. 1	9.5	14.6			1.6
Sept. 1	...	22.7	Sept. 18	...	9.9	25 Cygni.			Sept. 13	...	55.9
B.A.C. 6746.			R.H.C. 2990.					53.20	δ <sup>3</sup> Cygni.		
		105.47			4.13	Sept. 18	...	37.4			53.37
Aug. 25	5.7	44.7	Aug. 20	9.0	9.0	B.A.C. 6880.			Aug. 28	...	35.0
B.A.C. 6750.			25	9.5	9.9			105.48	4 Capricorni.		
		71.51	28	...	10.1	Aug. 5	7.0	26.8			112.14
Aug. 9	7.0	59.9	19 Cygni.			Sept. 13	...	28.6	Sept. 17	...	43.0
ε <sup>1</sup> Cygni.					51.38	B.A.C. 6896.			18	...	38.5
		39.48	Aug. 6	6.0	26.5			73.16	α <sup>2</sup> Capricorni.		
July 26	...	10.8	ω Sagittarii.			Aug. 23	6.7	31.8			102.58
Aug. 3	5.7	11.0			116.40	Sept. 17	...	31.5	Aug. 9	...	57.8
ε <sup>2</sup> Cygni.			Sept. 13	...	21.0	15 Sagittæ.			B.A.C. 6986.		
		39.48	ξ Aquilæ.					73.18			50.4
July 17	6.0	38.4			81.54	Aug. 19	...	43.2	Aug. 25	6.0	19.9
Aug. 5	6.7	38.1	Aug. 5	5.0	12.5	B.A.C. 6911.			30	6.0	21.1
15 Cygni.			19	...	11.6			100.28	B.A.C. 7017.		
		52.59	58 Aquilæ.			Aug. 9	6.0	14.9			23.36
Aug. 23	5.5	9.9			90.5	B.A.C. 6923.			Aug. 19	...	8.1
B.A.C. 6773.			Aug. 23	6.0	39.4			109.47	20	6.3	10.2
		111.18	R.H.C. 3000.			Aug. 30	7.0	34.5	Sept. 1	6.3	9.3
July 30	...	14.8			4.10	Rümker 8047.			π Capricorni.		
γ Aquilæ.			Aug. 9	9.7	24.7			81.57			108.40
		79.43	9 Sagittarii.			Aug. 20	6.5	54.6	Sept. 22	5.0	29.8
Aug. 30	...	47.1			105.51	Sept. 18	...	53.5			
Sept. 13	...	46.3	Aug. 27	...	55.5						

$\rho$ Capricorni.			$\nu$ Capricorni.			B.A.C. 7217.			B.A.C. 7300.		
	Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /
		108. 16			108. 38			11. 4			115. 37
Sept. 13	...	47. 9	Sept. 13	...	9. 3	Aug. 27	...	33. 0	Aug. 23	...	50. 9
			22	...	8. 4	Sept. 13	...	31. 8			
B.A.C. 7049.			W.B. xx. 821.			$\eta$ Cephei.			$\eta$ Capricorni.		
		112. 51						28. 42			110. 24
Sept. 18	...	31. 0			85. 31			"	Aug. 25	4. 7	48. 7
Oct. 5	5. 3	31. 9	Oct. 8	7. 7	45. 1	Oct. 5	...	42. 3	Oct. 8	5. 0?	49. 3
69 Aquilæ.			(S) Capricorni.			$\omega$ Capricorni.			$\theta$ Capricorni.		
<i>Reflexion.</i>					109. 33			117. 26			107. 47
		93. 21	Aug. 30	...	36. 1	Aug. 25	5. 0	51. 9	Sept. 18	...	" 39. 7
Aug. 23	...	18. 1				30	...	53. 5			
R.H.C. 3102.			Radcliffe 4926.			Sept. 18	...	50. 2	4 Equulei.		
		5. 15			4. 11	Oct. 8	...	49. 1			84. 36
Aug. 30	9. 3?	54. 2	Aug. 25	8. 5	20. 0	32 Vulpeculæ.			Oct. 11	6. 0	" 3. 9
B.A.C. 7070.			B.A.C. 7169.					62. 28	$\chi$ Capricorni.		
		112. 38			9. 3	Sept. 15	...	49. 5			111. 45
Aug. 25	...	17. 7	Aug. 19	...	7. 2	B.A.C. 7262.			Oct. 5	6. 0	" 40. 5
B.A.C. 7083.			$\alpha$ Cygni.					36. 1			
		44. 33			45. 13	Sept. 30	...	37. 5	Lalande 41030.		
Sept. 15	...	6. 1	Sept. 15	...	31. 3	1 Equulei (2d).					52. 2
Radcliffe 4881.			74 Draconis.					86. 14	Sept. 13	...	" 33. 6
		5. 21	<i>Reflexion.</i>			Sept. 1	7. 5	52. 3	$\gamma$ Equulei.		
Aug. 27	...	30. 0			9. 24	Oeltz. Arg. 21410.					80. 31
			Aug. 23	...	31. 6			15. 46	Sept. 1	5. 7	" 40. 3
Groombridge 3260.			51 Cygni.			Aug. 20	7. 5	55. 7	22	...	42. 3
		5. 54			40. 10	Sept. 13	...	55. 7			
Aug. 20	7. 3	46. 0	Sept. 1	6. 0	6. 6	10 Aquarii.			$\zeta$ Cygni.		
Sept. 1	7. 5	46. 6	Oeltz. Arg. 21012.					96. 1			60. 21
1 Aquarii.					14. 55	Aug. 30	6. 5	" 43. 9	Oct. 8	...	" 13. 3
		90. 0	Aug. 20	7. 3	30. 9	Oct. 5	6. 3	41. 8	11	...	12. 0
Oct. 5	...	34. 8	11 Aquarii.					95. 16	$\tau$ Cygni.		
					34. 6	Sept. 22	...	"			52. 33
									Sept. 15	...	" 31. 9

204 *Separate Results for Mean N.P.D. of Stars observed*

W. B. xxi. 246.			$\beta$ Aquarii.			45 Capricorni.			B.A.C. 7642.		
	Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /		Mag.	$\circ$ /
		81. 41			96. 11			105. 23			36. 44
Aug. 25	9.3	5.1	Aug. 23*	...	39.1	Sept. 18	...	51.0	Sept. 6	...	21.9
Sept. 30	9.5	3.4	Sept. 1	...	38.7	B.A.C. 7562.			R.H.C. 3347.		
Oct. 5	9.3	3.0	B.A.C. 7484.					99. 41			3. 38
W. B. xxi. 249.					6. 20	Oct. 11	7.5	14.6	Sept. 30	8.3	58.3
		81. 37	Sept. 18	...	42.7	$\mu$ Cephei.			Oct. 1	7.7	57.0
Aug. 30	7.5	60.6	B.A.C. 7485.					31. 52	* R.A. 21 <sup>h</sup> 53 <sup>m</sup> 36 <sup>s</sup> .		
Sept. 1	7.5	59.9			106. 49	Sept. 6	...	13.2			37. 49
R.H.C. 3232.			Sept. 13	...	24.4	B.A.C. 7586.			Sept. 24	...	29.2
		4. 41	Oct. 11	7.0	24.9			65. 5	Oct. 8	9.0	27.5
Oct. 11	8.5	49.2	Radcliffe 5290.			Sept. 30	7.0	33.3	B.A.C. 7676.		
$\epsilon$ Capricorni.					3. 2	B.A.C. 7590.					37. 48
		107. 26	Oct. 5	8.5	31.7			73. 27	Sept. 13	...	5.1
Aug. 23	...	11.9	72 Cygni.			Sept. 1	7.0	37.1	32 Aquarii.		
Sept. 18	...	12.7			52. 6	24	...	36.6			91. 35
I Pegasi (2d).			Sept. 22	...	2.6	Oct. 8	7.0	36.6	Sept. 22	...	27.5
		70. 48	$\epsilon$ Capricorni.			R.H.C. 3322.			15 Cephei.		
Sept. 22	...	4.2			110. 6			4. 19			30. 52
33 Capricorni.			Aug. 30	...	0.7	Sept. 13	...	23.9	Oct. 11	7.0	22.1
		111. 27	3 Pegasi (1st).			16 Pegasi.			$\xi^3$ Cephei.		
Sept. 13	...	13.6			84. 0			64. 44			26. 3
B.A.C. 7438.			Sept. 30	7.7	25.1	Oct. 13	...	28.0	Oct. 5	...	49.2
		13. 35	3 Pegasi (2d).			B.A.C. 7628.			B.A.C. 7715.		
Sept. 24	...	13.0			84. 1			94. 56			118. 59
$\zeta$ Capricorni.			Oct. 8	...	3.6	Sept. 18	...	25.4	Oct. 1	...	15.8
		113. 1	5 Pegasi.			W. B. xxi. 1125.			B.A.C. 7735.		
Oct. 11	...	26.2			71. 19			81. 13			7. 48
Piazzi xxi. 127.			Sept. 24	...	6.8	Oct. 5	9.7	36.5	Sept. 24	...	52.0
		112. 19	$\gamma$ Capricorni.			11	9.5	36.7			
Sept. 30	8.0	49.6			107. 18						
Oct. 8	8.0?	47.6	Aug. 23	...	7.3						

B.A.C. 7745.			53 Aquarii (2d).			B.A.C. 7891.			δ Aquarii.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
		115. 52			107. 27			119. 3			106. 34
Sept. 13	...	" 55. 3	Sept. 24	...	" 45. 3	Oct. 5	7. 0	" 43. 4	Nov. 10	...	" 28. 3
Oct. 8	6. 0	57. 6				9	...	" 42. 2			
						11	6. 7?	40. 7			
λ Piscis Australis.			* R.A. 22 <sup>h</sup> 19 <sup>m</sup> 40 <sup>s</sup> .			Radcliffe 5776.			B.A.C. 8004.		
					69. 58						103. 49
		118. 28	Oct. 9	9. 7?	" 50. 9				Sept. 24	6. 0	" 49. 8
Oct. 9	...	" 9. 0	30	10. 0	52. 3			2. 38			
B.A.C. 7753.			34 Pegasi.			11 Lacertæ.			2 Piscium.		
		56. 5			86. 19						89. 47
Oct. 13	...	" 39. 5	Oct. 26	...	" 47. 4			46. 27	Oct. 8	...	" 39. 5
θ Aquarii.			35 Pegasi.			Sept. 22	...	" 49. 0	R.H.C. 3519.		
		98. 29			86. 0	Oct. 1	...	" 49. 4			5. 42
Sept. 22	...	" 18. 0	Sept. 22	...	" 54. 4				Nov. 2	...	" 39. 5
B.A.C. 7782.			ζ <sup>1</sup> Aquarii.			Sept. 24	...	" 45. 8	9	7. 5	41. 8
		33. 29			90. 44	45 Pegasi.			R.H.C. 3520.		
Oct. 11	6. 0	" 16. 7	Oct. 1	...	" 42. 7			71. 29			5. 23
γ Aquarii.			11	...	44. 3	Nov. 9	5. 7	" 8. 4	Oct. 11	6. 0	" 17. 6
		92. 6	σ Aquarii.			B.A.C. 7951 (2d).			30	...	" 15. 5
Nov. 2	...	" 5. 2			101. 24			94. 57	Nov. 11	6. 0	" 14. 9
* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 46 <sup>s</sup> .			Aug. 23	...	" 10. 0	Oct. 8	...	" 55. 2	β Piscium.		
		18. 58	5 Lacertæ.								86. 56
Sept. 30	9. 7	" 27. 9			43. 1	70 Aquarii.			Sept. 30	5. 0	" 36. 4
Oct. 5	9. 5	29. 0	Oct. 5	...	" 10. 0			101. 18	3 Andromedæ.		
			13	...	10. 1	Oct. 9	...	" 15. 3			40. 43
* R.A. 22 <sup>h</sup> 14 <sup>m</sup> 51 <sup>s</sup> .			Nov. 2	...	6. 2	Groombridge 3888.			Oct. 5	...	" 9. 4
		18. 59	B.A.C. 7865.					44. 32	Nov. 10	...	" 7. 3
Sept. 13	...	" 51. 3			90. 8	Oct. 30	...	" 20. 7	B.A.C. 8048.		
Oct. 8	...	" 52. 6	Sept. 30	6. 5	" 2. 5	R.H.C. 3493.					9. 59
50 Aquarii.			Piazzi xxii. 158.					3. 27	Nov. 9	7. 0	" 0. 2
		104. 14			70. 27	Sept. 22	...	" 27. 5	A Piscium.		
Aug. 23	...	" 50. 4	Sept. 24	7. 0	" 17. 1	30	8. 3	" 29. 2			88. 38
			Oct. 8	...	" 16. 9	Oct. 5	7. 7	" 28. 8			" "
			30	7. 0	" 15. 2	11	7. 7	" 29. 3	Oct. 30	...	" 37. 9
						Nov. 9	...	" 29. 3			



B.A.C. 8064.			B.A.C. 8147.			Groombridge 4101.			R.H.C. 3653.		
	Mag.	o /		Mag.	o /		Mag.	o /		Mag.	o /
Nov. 11	...	118. 51 32.9	Oct. 1	...	70. 13 7.8	Nov. 11	5.7	3.28 34.0	Nov. 18	9.7	5.27 50.5
2 Cassiopeiae.			B.A.C. 8156.			16 Piscium.			8 Sculptoria.		
Oct. 8	6.0	31.26 13.6	Oct. 30	...	58.14 53.8	Sept. 22	5.7	88.41 7.9	Nov. 22	...	118.55 13.3
Oeltz. Arg. 25223.			B.Z. 376. 138.			74 Pegasi.			B.A.C. 8288.		
Oct. 1	...	31.28 55.9	Oct. 5	9.0	58.18 37.2	Nov. 2	7.0	73.57 35.0	Nov. 9	...	105.11 23.6
Nov. 2	...	52.2	8	9.0	35.4	18	6.5	35.9			
60 Pegasi.			v Pegasi.			i Piscium.			21 Piscium.		
Sept. 30	6.0	63.55 8.1	Nov. 10	...	67.22 35.5	Nov. 22	...	85.8 34.2	Nov. 10	...	89.42 42.4
B.A.C. 8104.			B.A.C. 8193.			B.A.C. 8239.			Groombridge 4154.		
Oct. 5	6.5	16.32 35.3	Sept. 22	...	94.51 48.3	Nov. 9	...	102.28 6.2	Oct. 5	7.3	15.14 51.6
30	...	32.2				ω <sup>2</sup> Aquarii.			8	6.7	54.2
Nov. 9	6.5	33.7				Oct. 5	...	105.19 48.2	11	6.7	53.0
11	6.3	31.7				8	5.0	48.0	B.A.C. 8321.		
ψ <sup>2</sup> Aquarii.			14 Andromedæ.			9	...	47.6	Oct. 30	6.5	7.35 57.2
Sept. 24	...	99.57 25.3	Oct. 11	6.0	51.32 37.7	Oeltz. Arg. 25960.			1 Ceti.		
Nov. 10	...	24.7	Nov. 2	...	35.3	Oct. 11	7.5	32.43 35.4	Sept. 30	...	106.38 14.6
B.A.C. 8126.			Radcliffe 6108.			19 Piscium.			Nov. 11	7.0?	17.4
Sept. 30	...	42.23 47.7	Sept. 30	8.0	4.46 27.3	Sept. 22	...	87.18 3.4	18	6.5	14.6
Nov. 2	...	48.0	Oct. 30	...	26.6	Nov. 11	...	0.5	ω Piscium.		
B.Z. 324. 12.			Nov. 9	8.0	26.1	Radcliffe 6172.			Oct. 9	...	83.55 22.8
Oct. 11	7.7	70.8 20.1	18	7.7	26.0	Oct. 5	7.7	5.19 9.0	B.A.C. 8333.		
65 Pegasi.			Radcliffe 6117.			8	7.0	33.6 31.6	Oct. 5	7.0	96.40 53.9
Nov. 9	7.0	69.56 54.4	Oct. 5	7.7	4.13 33.6	Nov. 10	7.5	31.6	Nov. 22	7.0	51.6
						8	7.0	31.6			
						Nov. 10	7.5	31.6			

Groombridge 4193.			B.A.C. 8338.			85 Pegasi.			Radcliffe 6314.		
	Mag.	0 /		Mag.	0 /		Mag.	0 /		Mag.	0 /
		4 5			28.36			63.40			4 0
Nov. 23	...	" 5.0	Nov. 9	7.0?	" 45.9	Oct. 8	6.5	" 11.8	Oct. 11	8.3	" 11.2
			10	...	46.2				30	8.7	9.1



**RADCLIFFE OBSERVATORY,  
OXFORD.**

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**CATALOGUE  
OF  
CONCLUDED MEAN RIGHT ASCENSIONS  
AND  
MEAN NORTH POLAR DISTANCES  
FOR 1858, JANUARY 1,  
OF STARS OBSERVED IN THE YEAR 1858;  
WITH THE  
ANNUAL PRECESSIONS.**

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1	$\alpha$ Andromedæ .	...	...	...	0 1 3	.....	3	'89	61 41 35'9	—19'90
2	B.A.C. 6 .....	6'6	...	...	0 1 36	.....	3	'86	11 4 29'6	20'06
3	$\beta$ Cassiopeiæ...	...	2	'80	0 1 37'62	+3'086	...	...	31 38	.....
4	B.A.C. 10 .....	6'5	...	...	0 2 6	.....	1	'84	108 46 44'5	20'06
5	6 Ceti .....	5'7	1	'72	0 4 1'96	3'063	1	'77	106 14 53'2	20'05
6	$\gamma$ Pegasi .....	...	1	'86	0 5 55'61	3'080	...	...	75 36	.....
7	Radcliffe 28 ...	8'3	...	...	0 6 2	.....	1	'72	4 3 49'8	20'05
8	Radcliffe 33 ...	9'0	...	...	0 6 45	.....	1	'85	4 7 5'3	20'04
9	B.A.C. 47 .....	...	1	'86	0 9 22'86	3'072	...	...	89 0	.....
10	38 Piscium (1st)	8'3	1	'88	0 10 5'51	3'079	1	'89	81 54 57'2	20'04
11	38 Piscium (2d)	...	...	...	0 10 10	.....	1	'83	81 54 54'5	20'04
12	39 Piscium ...	7'7	1	'86	0 10 28'28	3'088	...	...	74 27	.....
13	Radcliffe 56 ...	8'3	...	...	0 11 20	.....	1	'82	1 20 31'9	20'03
14	$\epsilon$ Ceti.....	...	1	'85	0 12 11'46	3'059	...	...	99 37	.....
15	$\delta$ Piscium .....	5'7	4	'83	0 13 17'61	3'080	4	'81	82 35 56'6	20'02
16	9 Ceti .....	6'4	1	'89	0 15 35'42	3'050	4	'87	103 0 0'9	20'01
17	B.A.C. 81 .....	7'0	1	'86	0 17 14'31	3'065	...	...	93 0	.....
18	B.A.C. 86 .....	7'0	1	'85	0 18 6'42	3'628	...	...	10 44	.....
19	45 Piscium ...	...	2	'76	0 18 22'79	3'083	1	'72	83 5 40'6	19'99
20	10 Ceti .....	6'8	2	'88	0 19 20'58	3'069	...	...	90 50	.....
21	B.A.C. 97 .....	7'0?	...	...	0 20 3	.....	1	'83	87 58 19'3	19'97
22	B.A.C. 98 .....	7'0	1	'86	0 20 8'33	3'103	...	...	74 46	.....
23	47 Piscium ...	...	...	...	0 20 39	.....	1	'89	72 53 38'5	19'97
24	11 Ceti .....	7'5	...	...	0 22 39	.....	1	'77	91 54 2'3	19'96
25	B.A.C. 111 ...	...	1	'80	0 22 40'27	3'033	...	...	105 39	.....
26	Groom. 67.....	8'1	1	'82	0 22 42'71	4'753	2	'84	4 27 57'5	19'95
27	12 Ceti .....	6'3	4	'87	0 22 47'66	3'059	1	'85	94 44 36'2	19'95
28	Radcliffe 104...	...	...	...	0 23 1	.....	2	'87	4 4 31'1	19'95
29	13 Cassiopeiæ .	6'3	1	'88	0 23 17'56	3'371	1	'89	24 15 58'3	19'95
30	52 Piscium ...	...	1	'80	0 25 9'33	3'123	...	...	70 29	.....
31	B.A.C. 132 ...	8'3	1	'89	0 26 13'46	3'067	...	...	91 24	.....
32	Radcliffe 134...	7'5	...	...	0 26 33	.....	2	'82	6 6 26'3	19'92
33	B.A.C. 138 ...	7'3	1	'85	0 27 14'72	3'056	1	'92	95 19 50'3	19'91
34	13 Ceti .....	6'2	2	'86	0 27 56'39	+3'058	...	...	94 23	.....
35	B.A.C. 147 ...	6'0	...	...	0 28 15	.....	3	'85	91 17 11'7	—19'90

7, 8, 13, 28, 32. Identical with R.H.C. 13, 15, 23, 56, and 65, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
36	B.A.C. 154 ...	6.7	2	.88	0 29 13.36	+4.237	1	.85	8 17 30.0	-19.89
37	B.A.C. 161 ...	7.1	2	.85	0 30 11.78	3.078	...	...	87 40	...
38	ε Andromedæ .	...	2	.81	0 31 3.74	3.168	...	...	61 28	...
39	δ Andromedæ .	...	2	.88	0 31 44.67	3.178	1	.88	59 55 0.6	19.86
40	32 Andromedæ.	6.0	2	.84	0 33 26.12	3.226	...	...	51 19	...
41	B.A.C. 174 ...	...	...	...	0 33 28	...	2	.84	95 7 55.5	19.84
42	B.A.C. 178 ...	6.5	...	...	0 34 5	...	1	.92	66 8 58.9	19.83
43	B.A.C. 191 ...	7.5	2	.88	0 35 47.36	3.054	1	.86	94 38 9.1	19.81
44	β Ceti .....	...	1	.92	0 36 27.60	3.013	2	.89	108 46 0.8	19.82
45	φ <sup>1</sup> Ceti .....	5.5	2	.81	0 37 1.62	3.028	...	...	101 23	...
46	B.A.C. 204 ...	6.7	...	...	0 37 52	...	3	.83	90 31 22.2	19.78
47	61 Piscium ...	7.0	1	.85	0 40 23.59	3.157	2	.86	69 51 4.1	19.74
48	η <sup>1</sup> Cassiopeiæ..	...	1	.92	0 40 32.23	3.434	2	.89	32 56 19.3	19.74
49	η <sup>2</sup> Cassiopeiæ..	8.0	2	.92	0 40 33.14	3.434	...	...	32 56	...
50	δ Piscium .....	5.0	2	.81	0 41 19.11	3.099	1	.80	83 11 20.3	19.72
51	64 Piscium ...	5.4	2	.86	0 41 31.36	3.141	...	...	73 50	...
52	B.A.C. 225 ...	6.0	1	.89	0 41 52.33	5.030	...	...	7 4	...
53	B.A.C. 232 ...	...	1	.89	0 42 51.30	3.375	...	...	39 16	...
54	φ <sup>2</sup> Ceti .....	...	...	...	0 43 1	...	1	.83	101 24 35.5	19.70
55	20 Ceti .....	5.0	2	.87	0 45 45.13	3.062	2	.87	91 54 57.0	19.65
56	Groom. 144 ...	6.5	4	.45	0 46 5.65	11.844	2	.84	1 44 25.8	19.64
57	ν <sup>1</sup> Cassiopeiæ .	...	1	.83	0 46 36.17	3.506	...	...	31 48	...
58	21 Ceti .....	6.5	1	.80	0 47 6.95	3.025	2	.86	99 30 38.3	19.63
59	γ Cassiopeiæ...	...	1	.89	0 48 10.53	3.552	...	...	30 3	...
60	φ <sup>3</sup> Ceti .....	6.0	4	.86	0 48 54.30	3.011	...	...	102 2	...
61	Radcliffe 253...	9.3	...	...	0 49 40	...	1	.84	1 46 11.5	19.59
62	2 Ursæ Minoris	5.0	1	.31	0 50 3.16	6.742	1	.88	4 30 27.9	19.58
63	B.A.C. 270 ...	...	...	...	0 50 58	...	2	.88	83 55 28.8	19.56
64	Groom. 175 ...	...	...	...	0 52 0	...	1	.85	2 29 44.4	19.54
65	Groom. 195 ...	6.3	...	...	0 53 10	...	2	.90	3 36 49.4	19.51
66	* .....	9.3	2	.89	0 54 12.71	3.600	...	...	30 39	...
67	ε Piscium .....	4.3	4	.86	0 55 34.68	3.110	2	.88	82 52 30.4	19.47
68	25 Ceti .....	6.0	1	.85	0 55 51.74	3.039	1	.82	95 35 48.6	19.45
69	B.A.C. 290 ...	...	...	...	0 55 55	...	1	.86	36 33 24.4	-19.45
70	ψ <sup>1</sup> Piscium (1st)	6.0	1	.92	0 58 4.39	+3.197	...	...	69 17	...

61. This is identical with R.H.C. 127.

212 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pro- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pro- cession in N.P.D.
					h. m. s.	s.			° ' "	
71	$\psi^1$ Piscium (2d)	6.3	1	.92	0 58 53.3	+3.197	...	...	69 17	...
72	77 Piscium (2d)	7.7	1	.88	0 58 30.98	3.095	...	...	88 51	...
73	41 Andromedæ	...	1	.89	0 59 52.72	3.395	...	...	46 49	...
74	B.A.C. 320 ...	5.7	2	.83	1 0 9.61	4.841	...	...	11 5	...
75	78 Piscium ...	...	1	.88	1 0 10.48	3.281	...	...	58 45	...
76	$\psi^2$ Piscium ...	6.2	1	.89	1 0 20.56	3.197	1	.86	70 1 2.4	19.36
77	30 Ceti .....	6.5	...	...	1 0 38	...	1	.88	100 32 48.4	19.36
78	7 Ceti .....	4.0	1	.86	1 1 26.80	3.002	1	.92	100 56 11.7	19.34
79	$\beta$ Andromedæ.	...	1	.92	1 1 47.78	3.319	...	...	55 8	...
80	32 Cassiopeizæ.	...	...	...	1 2 24	...	1	.38	25 44 16.2	19.32
81	$\theta$ Cassiopeizæ...	4.7	1	.92	1 2 28.85	3.574	1	.84	35 36 24.8	19.32
82	B.A.C. 341 ...	6.0	1	.88	1 2 39.98	3.167	1	.85	75 4 57.2	19.32
83	45 Andromedæ	6.0	...	...	1 3 8	...	1	.92	53 1 56.3	19.30
84	B.A.C. 351 ...	7.3	1	.92	1 4 2.89	3.153	...	...	10 51	...
85	B.A.C. 350 ...	...	1	.85	1 4 6.36	4.997	...	...	80 28	...
86	B.A.C. 352 ...	...	...	...	1 4 22	...	1	.89	45 25 9.5	19.27
87	B.A.C. 358 ...	7.0	1	.82	1 5 10.91	3.282	...	...	60 41	...
88	$\zeta^1$ Piscium.....	6.0	4	.88	1 6 19.04	3.117	3	.87	83 10 36.0	19.23
89	$\zeta^2$ Piscium.....	6.6	2	.90	1 6 20.49	3.117	...	...	83 11	...
90	38 Ceti .....	6.5	1	.86	1 7 34.35	3.059	...	...	91 44	...
91	B.A.C. 378 ...	6.8	1	.92	1 8 37.38	4.755	1	.92	13 10 57.5	19.16
92	39 Ceti .....	5.7	...	...	1 9 24	...	1	.86	93 14 59.8	19.14
93	47 Andromedæ	6.0	...	...	1 15 34	...	1	.88	53 1 40.6	18.97
94	B.A.C. 410 ...	8.0	1	.82	1 15 31.63	3.122	...	...	83 20	...
95	$\psi$ Cassiopeizæ...	...	...	...	1 15 57	...	3	.85	22 36 47.4	18.96
96	B.A.C. 418 ...	6.3	...	...	1 16 49	...	2	.88	115 5 44.0	...
97	$\theta$ Ceti .....	...	2	.87	1 16 55.59	2.996	1	.88	98 55 2.0	18.72
98	Groom. 307 ...	7.7	1	.92	1 17 46.24	...	...	...	16 33	...
99	95 Piscium ...	7.3	...	...	1 20 17	...	1	.92	85 22 49.1	18.84
100	A Cassiopeizæ...	5.5	1	.88	1 20 43.86	4.306	...	...	20 28	...
101	B.A.C. 443 ...	7.2	1	.89	1 22 5.91	4.310	1	.82	20 42 51.6	18.78
102	B.A.C. 444 ...	7.0	1	.92	1 22 10.64	4.213	1	.89	22 19 24.9	18.78
103	* .....	9.5	...	...	1 23 10	...	1	.88	87 45 51.0	18.75
104	B.A.C. 452 ...	6.3	1	.88	1 23 41.32	2.829	2	.85	116 56 32.6	18.74
105	7 Piscium .....	...	1	.89	1 23 53.35	+3.197	...	...	75 23	...

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
106	B.A.C. 454 ...	...	1	·88	1 24 12·66	+3'157	...	...	79 51	...
107	B.A.C. 469 ...	6·5	2	·88	1 27 8·46	3'229	...	...	72 16	...
108	Radcliffe 467 ...	8·2	5	·35	1 27 52·64	8'261	...	...	5 30	...
109	50 Andromedæ ...	4·7	1	·92	1 28 28·69	3'504	1	·88	49 18 23·3	18·58
110	R.H.C. 227 ...	9·3	...	...	1 28 57	...	2	·88	5 39 31·2	18·57
111	B.A.C. 490 ...	7·5	1	·92	1 30 7·73	3'174	1	·89	78 38 49·5	18·52
112	42 Cassiopeie ...	5·5	1	·92	1 31 59·43	4'498	...	...	20 6	...
113	Groom. 339 ...	8·3	3	·87	1 32 10·03	11'002	...	...	3 46	...
114	B.A.C. 504 ...	6·0	...	...	1 32 10	...	2	·89	115 44 46·8	18·45
115	7 Andromedæ ...	...	1	·89	1 32 12·67	3'508	1	·85	50 8 38·5	18·45
116	B.A.C. 509 ...	7·0	1	·86	1 33 3·14	3'979	1	·86	30 10 17·0	18·43
117	B.A.C. 510 ...	...	...	...	1 33 9	...	1	·89	48 6 3·4	18·42
118	B.A.C. 514 ...	6·7	1	·92	1 33 38·27	3'369	...	...	60 40	...
119	54 Andromedæ ...	...	...	...	1 34 47	...	1	·97	40 1 41·6	18·36
120	Radcliffe 500 ...	...	...	...	1 36 22	...	1	·85	2 12 23·3	18·30
121	7 Ceti ...	4·0	...	...	1 37 29	...	1	·89	186 41 10·4	18·27
122	6 Piscium ...	...	2	·85	1 37 54·01	3'153	...	...	81 34	...
123	6 Sculptoris ...	5·7	1	·88	1 38 59·72	2'801	...	...	115 46	...
124	Lalande 3259 ...	...	1	·92	1 39 39·99	3'284	...	...	69 18	...
125	B.A.C. 544 ...	6·5	1	·89	1 40 16·92	3'501	1	·88	52 45 21·4	18·17
126	B.A.C. 545 ...	7·3	1	·92	1 40 43·84	5'635	...	...	12 30	...
127	Lalande 3310 ...	7·3	...	...	1 41 34	...	1	·92	64 14 6·3	18·12
128	B.A.C. 555 ...	6·5	1	·88	1 41 53·03	3'786	...	...	38 46	...
129	6 Cassiopeie ...	...	2	·87	1 44 13·29	4'222	...	...	27 2	...
130	Lalande 3405 ...	...	1	·85	1 44 16·04	3'325	1	·85	66 35 14·3	18·01
131	ζ Ceti ...	3·0	...	...	1 44 27	...	4	·88	101 2 19·8	18·01
132	α Trianguli ...	...	1	·92	1 44 59·78	3'397	...	...	61 7	...
133	γ Arietis (N) ...	4·7	1	·88	1 45 44·72	3'271	1	·88	71 24 5·9	17·96
134	γ Arietis (S) ...	5·0	1	·88	1 45 44·80	3'271	...	...	71 24	...
135	β Arietis ...	...	1	·85	1 46 48·18	3'294	1	·86	69 53 13·6	17·81
136	56 Andromedæ ...	...	1	·85	1 47 44·06	3'519	...	...	53 27	...
137	7 Arietis ...	6·4	...	...	1 47 56	...	2	·94	67 7 14·1	17·86
138	B.A.C. 586 ...	7·0	1	·89	1 48 33·65	3'082	...	...	88 51	...
139	Groom. 410 ...	7·0	1	·92	1 49 5'99	5'325	...	...	15 11	...
140	ι Arietis ...	5·4	1	·88	1 49 36·00	+3'260	2	·88	72 52 38·4	17·80

108 and 120. Identical with R.H.C. 225 and 251 respectively.



214 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
141	B.A.C. 607 ...	...	1	.88	1 51 43.36	+3.303	...	...	69 38	...
142	Radcliffe 559...	7.7	...	...	1 52 28	...	1	...	1 29 55.3	-17.68
143	B.A.C. 612 ...	6.0	...	...	1 52 32	...	2	.85	84 39 20.6	17.68
144	112 Piscium ...	...	1	.85	1 52 46.37	3.098	...	...	87 35	...
145	51 Cassiopeie .	...	1	.89	1 53 11.21	5.266	...	...	16 6	...
146	$\alpha^1$ Piscium ...	6.0	1	.88	1 54 42.00	3.094	...	...	87 55	...
147	$\gamma^3$ Andromedæ ...	...	1	.85	1 55 12.77	3.643	...	...	48 21	...
148	B.A.C. 629 ...	...	...	...	1 55 23	...	1	.85	79 40 3.5	17.56
149	10 Arietis .....	7.0	1	.89	1 55 36.24	3.376	...	...	64 45	...
150	54 Cassiopeie .	6.7	1	.88	1 56 57.68	4.955	...	...	19 7	...
151	Lalande 3825 .	7.3	1	.85	1 57 21.24	3.637	1	.99	49 8 54.8	17.48
152	B.A.C. 641 ...	7.0	...	...	1 57 22	...	1	.89	82 56 50.6	17.48
153	$\kappa$ Arietis .....	...	...	...	1 58 37	...	1	.89	68 1 50.0	17.43
154	$\alpha$ Arietis .....	...	1	.92	1 59 10.42	3.364	...	...	67 13	...
155	58 Andromedæ .	5.0	1	.85	1 59 55.82	3.578	1	.88	52 48 59.6	17.38
156	Radcliffe 606...	8.5	2	.35	1 59 58.47	22.743	...	...	1 56	...
157	$\beta$ Trianguli ...	...	2	.87	2 1 6.37	3.530	2	.89	55 41 10.1	17.32
158	Oeltz. Arg. 2423	7.8	2	.87	2 1 22.28	3.887	...	...	39 37	...
159	16 Arietis .....	6.7	1	.92	2 3 7.77	3.394	2	.85	64 44 5.6	17.22
160	B.A.C. 669 ...	...	...	...	2 3 30	...	1	.86	69 17 39.3	17.21
161	Oeltz. Arg. 2462	8.5	1	.86	2 3 30.36	3.863	...	...	40 54	...
162	64 Ceti .....	...	...	...	2 3 51	...	1	.88	82 5 47.8	17.19
163	6 Trianguli (1).	...	...	...	2 4 8	...	1	.99	60 21 53.0	17.18
164	6 Trianguli (2).	7.0	1	.88	2 4 8.87	3.463	...	...	60 22	17.18
165	7 Arietis .....	...	...	...	2 4 51	...	1	.01	69 27 28.7	17.15
166	* .....	...	1	.85	2 5 59.23	4.081	...	...	34 40	...
167	20 Arietis .....	6.3	1	.92	2 7 38.74	3.402	1	.96	64 52 39.5	17.02
168	B.A.C. 700 ...	...	...	...	2 9 8	...	2	.93	33 31 25.3	...
169	67 Ceti .....	6.3	1	.86	2 9 54.28	2.986	1	.85	97 4 42.8	16.79
170	Lalande 4249 .	7.0	...	...	2 9 54	...	3	.91	97 14 20.6	16.95
171	B.A.C. 708 ...	...	...	...	2 10 38	...	1	.89	88 54 57.7	16.89
172	6 Ceti .....	2.7	5	.91	2 12 10.46	3.024	...	...	93 37	...
173	B.A.C. 725 ...	8.0	...	...	2 13 10	...	1	.99	33 24 24.7	16.76
174	$\kappa$ Fornacis .....	...	1	.86	2 16 2.77	2.731	1	.01	114 27 45.2	-16.62
175	B.A.C. 741 ...	...	1	.88	2 16 55.61	+3.191	...	...	80 56	...

142, 156. Identical with R.H.C. 284, and 305, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
176	B.A.C. 743 ...	...	1	'96	2 17 3'13	+2'677	...	...	117 38	...
177	66 Andromedæ ...	6·5	1	'88	2 18 21'60	3'973	...	...	40 4	...
178	Radcliffe 693...	8·7	2	'38	2 18 34'95	29'916	...	...	1 38	...
179	11 Trianguli ...	...	...	...	2 19 3	...	1	'99	60 21 53'0	16'49
180	B.A.C. 755 ...	6·5	...	...	2 19 9	...	2	'88	80 4 33'5	16'49
181	25 Arietis .....	...	...	...	2 19 51	...	1	'92	80 26 3'8	16'43
182	27 Arietis .....	7·0	...	...	2 23 2	...	1	'01	72 55 34'3	16'27
183	75 Ceti .....	...	...	...	2 24 56	...	1	'89	91 39 52'1	16'17
184	σ Ceti .....	...	1	'88	2 25 21'42	2'845	1	'96	105 52 14'0	16'15
185	B.A.C. 784 ...	6·0	...	...	2 27 35	...	2	'46	9 9 35'9	16'03
186	B.A.C. 789 ...	...	...	...	2 27 35	...	1	'89	83 8 57'5	16'03
187	77 Ceti .....	...	...	...	2 27 42	...	1	'88	98 28 54'8	16'03
188	ν Ceti .....	...	2	'94	2 28 25'55	3'141	...	...	85 2	...
189	30 Arietis .....	...	1	'89	2 28 46'88	3'431	...	...	65 58	...
190	B.A.C. 795 ...	...	...	...	2 28 47	...	1	'99	18 59 23'6	15'96
191	B.A.C. 797 ...	...	1	'89	2 28 49'73	3'432	...	...	65 58	...
192	ν Arietis .....	5·7	1	'01	2 30 45'75	3'390	...	...	68 39	...
193	B.A.C. 810 ...	...	...	...	2 31 26	...	1	'99	79 58 35'4	15'82
194	Radcliffe 756...	9·0	1	'44	2 31 33'10	13'019	1	'03	4 43 24'7	15'82
195	12 Persæi .....	...	...	...	2 33 18	...	1	'01	50 24 34'1	15'73
196	B.A.C. 826 ...	...	...	...	2 34 22	...	1	'92	80 3 50'3	15'68
197	θ Persæi .....	...	...	...	2 34 31	...	1	'88	41 22 31'9	15'67
198	γ Ceti .....	...	4	'71	2 35 56'83	3'100	...	...	87 22	...
199	36 Arietis .....	...	...	...	2 36 24	...	1	'89	72 50 23'7	15'56
200	38 Arietis .....	5·5	...	...	2 37 14	...	1	'03	78 9 17'3	15'52
201	Radcliffe 780...	...	...	...	2 37 14	...	1	'99	5 56 43'6	15'52
202	B.A.C. 854 ...	6·0	...	...	2 37 56	...	1	'92	116 6 3'3	15'48
203	τ <sup>1</sup> Eridani .....	...	...	...	2 38 28	...	1	'96	109 10 34'4	15'44
204	π Arietis .....	5·5	...	...	2 41 22	...	2	'02	73 7 42'5	15'29
205	41 Arietis .....	...	...	...	2 41 38	...	1	'89	63 19 39'5	15'26
206	17 Persæi .....	5·5	...	...	2 42 46	...	1	'88	55 31 37'8	15'20
207	τ <sup>2</sup> Eridani .....	5·0	3	'93	2 44 35'98	+2'723	...	...	111 35	...
208	Radcliffe 827...	8·3	...	...	2 47 19	...	3	'67	5 42 45'1	14'93
209	ρ <sup>3</sup> Arietis .....	6·0	...	...	2 48 25	...	1	'88	72 32 45'0	14'87
210	Radcliffe 836...	8·5	...	...	2 48 50	...	1	'03	5 34 14'6	14'86

178, 194, 201, 208, 210. Identical with R.H.C. 347, 377, 398, 422, and 426, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
211	η Eridani .....	...	...	...	2 49 29	...	3	64	99 27 58.2	-14.81
212	47 Arietis .....	5.7	1	.99	2 49 57.90	+3.401	1	.01	69 54 11.3	14.78
213	B.A.C. 908 ...	6.6	3	.63	2 49 59.55	8.718	...	...	9 5	...
214	ε Arietis .....	5.3	1	.92	2 51 6.04	3.415	1	.89	69 13 50.0	14.72
215	B.A.C. 932 ...	7.5	1	.03	2 52 23.51	3.723	...	...	54 27	...
216	51 Arietis .....	6.7	...	...	2 54 1	...	1	.04	63 56 51.2	14.54
217	ρ <sup>1</sup> Eridani .....	...	...	...	2 54 11	...	1	.89	98 13 32.5	14.53
218	α Ceti .....	...	2	.46	2 54 51.64	3.126	1	.01	86 28 11.8	14.38
219	ρ Persei .....	...	2	.94	2 56 5.36	3.805	...	...	51 43	...
220	τ <sup>8</sup> Eridani .....	...	...	...	2 56 8	...	1	.99	114 11 1.8	14.42
221	B.A.C. 955 ...	...	...	...	2 56 37	...	1	.03	16 9 10.9	14.38
222	ι Persei .....	4.3	3	.03	2 58 50.38	4.155	...	...	40 56	...
223	Groom. 595 ...	5.9	5	.82	2 59 25.81	12.678	1	.89	5 36 13.4	14.22
224	53 Arietis .....	...	1	.89	2 59 26.40	3.365	...	...	72 40	...
225	κ Persei .....	...	...	...	2 59 56	...	1	.01	45 41 2.5	14.19
226	B.A.C. 976 ...	7.7	...	...	3 1 12	...	2	.03	69 47 4.5	14.11
227	B.A.C. 979 ...	5.7	1	.03	3 2 28.20	7.278	1	.03	12 47 39.9	14.03
228	δ Arietis .....	...	2	.94	3 3 30.90	3.416	...	...	70 49	...
229	α Eridani .....	...	...	...	3 6 2	...	3	.35	119 32 56.5	13.80
230	B.A.C. 1001 ...	...	...	...	3 7 31	...	1	.01	24 52 18.2	13.71
231	14 Eridani .....	5.8	...	...	3 9 43	...	3	.33	99 40 58.9	13.57
232	95 Ceti .....	5.7	2	.95	3 11 6.66	3.045	...	...	91 27	...
233	B.A.C. 1025 ...	...	...	...	3 11 46	...	1	.97	61 28 8.2	13.44
234	κ <sup>1</sup> Ceti .....	5.5	1	.96	3 11 54.89	3.120	...	...	87 9	...
235	60 Arietis .....	7.2	...	...	3 12 0	...	2	.51	64 51 6.7	13.42
236	B.A.C. 1035 ...	...	...	...	3 13 11	...	1	.01	41 17 54.1	13.34
237	Lalande 6247 ...	8.6	...	...	3 15 53	...	2	.03	73 47 14.1	13.17
238	64 Arietis .....	5.5	1	.92	3 15 55.84	3.524	1	.05	65 46 57.1	13.16
239	B.A.C. 1055 ...	7.5	...	...	3 16 20	...	1	.04	68 27 58.5	13.14
240	66 Arietis .....	6.0	...	...	3 20 9	...	1	.92	67 41 17.4	12.88
241	B.A.C. 1073 ...	...	...	...	3 20 23	...	1	.96	117 49 8.5	12.86
242	Groom. 642 ...	6.0	3	.65	3 20 23.95	+18.462	3	.34	3 48 42.6	12.86
243	B.A.C. 1089 ...	...	...	...	3 23 29	...	1	.97	42 32 4.6	12.67
244	ι Tauri .....	6.5	...	...	3 24 55	...	2	.04	81 6 34.3	12.56
245	B.A.C. 1096 ...	6.7	...	...	3 26 3	...	1	.99	72 38 10.4	-12.48

229. In previous sections called 12 Eridani.

244. In previous sections called 6 Tauri.

No.	Name of Star.	Mag.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Precession in R. A.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ' "	"
246	R.H.C. 505 ...	8.7	1	.44	3 27 13.53	+15.553	...	...	4 49	...
247	B.A.C. 1110 ...	6.9	1	.04	3 29 30.51	3.073	1	.04	89 52 44.4	-12.24
248	10 Tauri .....	...	...	...	3 29 38	...	1	.01	90 3 4.0	12.23
249	B.A.C. 1121 ...	...	...	...	3 31 21	...	1	.92	120 17 54.4	12.12
250	21 Eridani ...	5.7	...	...	3 32 0	...	1	.03	96 5 4.3	12.07
251	B.A.C. 1127 ...	...	...	...	3 32 37	...	1	.05	23 14 58.4	12.03
252	8 Persei .....	...	2	.94	3 32 49.73	4.232	1	.97	42 40 14.6	12.01
253	22 Eridani .....	5.9	3	.02	3 33 36.65	2.964	1	.03	95 40 23.0	11.95
254	14 Tauri .....	6.9	2	.03	3 35 34.98	3.447	2	.05	70 47 14.5	11.82
255	17 Tauri .....	...	...	...	3 36 26	...	1	.96	66 20 9.5	11.76
256	B.A.C. 1155 ...	7.3	...	...	3 37 26	...	1	.99	67 18 0.8	11.69
257	π Eridani .....	5.3	2	.02	3 39 25.99	2.827	...	...	102 33	...
258	27 Tauri .....	...	3	.97	3 40 43.44	3.550	1	.01	66 23 1.0	11.46
259	28 Tauri .....	5.3	...	...	3 40 45	...	2	.05	66 18 2.4	11.45
260	B.A.C. 1187 ...	...	1	.04	3 41 29.38	3.558	...	...	66 5	...
261	B.A.C. 1205 ...	7.6	2	.03	3 44 56.33	3.040	...	...	91 35	...
262	30 Eridani .....	6.0	1	.03	3 45 40.95	2.957	...	...	95 47	...
263	A Persei .....	...	...	...	3 46 4	...	1	.97	39 43 14.5	11.07
264	32 Eridani (1st) ...	...	...	...	3 47 10	...	2	.05	93 22 34.4	10.98
265	32 Eridani (2d) ...	...	...	...	3 47 10	...	2	.04	93 22 40.1	10.98
266	B.A.C. 1222 ...	...	1	.92	3 48 25.72	2.471	2	.51	118 5 30.8	10.90
267	B.A.C. 1229 ...	7.1	3	.02	3 49 50.99	2.789	1	.96	104 0 48.0	10.78
268	λ Tauri .....	4.7	1	.04	3 52 49.15	3.314	1	.01	77 54 50.7	10.57
269	Groom. 750 ...	6.7	5	.36	3 53 14.34	16.540	...	...	4 50	...
270	τ <sup>9</sup> Eridani .....	...	...	...	3 53 52	...	1	.07	114 25 18.4	10.48
271	ν Tauri .....	5.0	1	.01	3 55 36.38	3.183	2	.05	84 24 27.8	10.36
272	B.A.C. 1247 ...	6.0	...	...	3 55 45	...	1	.07	6 33 8.7	10.35
273	A <sup>1</sup> Tauri .....	4.8	4	.26	3 56 18.41	3.527	...	...	68 19	...
274	* .....	8.8	1	.96	3 58 0.73	3.479	1	.04	70 30 51.4	10.17
275	50 Persei .....	5.7	...	...	3 59 9	...	1	.99	52 20 12.0	10.09
276	B.A.C. 1273 ...	...	1	.99	3 59 46.29	2.454	...	...	118 3	...
277	ω <sup>1</sup> Tauri .....	6.3	1	.05	4 0 53.81	3.475	2	.04	70 46 8.5	9.96
278	* .....	10.2	2	.02	4 3 54.70	3.339	...	...	77 4	...
279	B.A.C. 1286 ...	6.2	2	.03	4 4 24.42	5.226	2	.51	28 30 45.0	9.70
280	* .....	7.8	2	.06	4 6 30.14	+4.307	1	.07	43 34 52.3	-9.53

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
281	48 Tauri .....	6.7	...	...	4 7 43	...	1	.06	74 57 30.1	-9.44
282	B.A.C. 1308 ...	...	1	.03	4 8 25.69	+2.375	...	...	120 28	...
283	o <sup>3</sup> Eridani .....	5.0	1	.03	4 8 44.24	2.907	1	.05	97 52 36.4	9.36
284	R.H.C. 611 ...	8.5	1	.49	4 8 44.24	17.693	...	...	4 37	...
285	ω <sup>3</sup> Tauri .....	...	1	.05	4 8 56.53	3.507	2	.51	69 46 27.7	9.34
286	51 Tauri .....	6.0	...	...	4 10 0	...	1	.99	68 46 17.4	9.26
287	φ Tauri .....	5.1	4	.03	4 11 37.59	3.677	...	...	63 0	...
288	γ Tauri .....	...	...	...	4 11 43	...	2	.02	74 43 7.4	9.12
289	55 Tauri .....	7.7	...	...	4 11 47	...	1	...	73 49 26.8	9.12
290	λ Tauri .....	5.7	...	...	4 11 58	...	1	.07	76 18 40.3	9.11
291	58 Tauri .....	6.0	...	...	4 12 33	...	2	.07	75 14 56.4	9.06
292	B.A.C. 1335 ...	6.6	4	.05	4 12 53.71	3.358	1	.03	76 28 45.7	9.04
293	B.A.C. 1342 ...	6.7	2	.96	4 14 1.94	3.518	1	.96	69 31 4.4	8.94
294	60 Tauri .....	6.3	...	...	4 14 4	...	1	.06	76 15 44.3	8.94
295	B.A.C. 1347 ...	7.7	2	.04	4 14 55.83	3.606	1	.05	65 55 48.3	8.87
296	δ <sup>3</sup> Tauri .....	...	2	.06	4 15 54.82	3.441	1	.03	72 53 17.9	8.79
297	κ <sup>3</sup> Tauri .....	...	2	.06	4 16 57.71	3.554	...	...	68 8	...
298	ν <sup>1</sup> Tauri .....	...	1	.96	4 17 48.97	3.570	1	.96	67 30 43.8	8.65
299	76 Tauri .....	7.0	...	...	4 20 21	...	2	.05	75 34 44.5	8.44
300	θ <sup>3</sup> Tauri .....	...	1	.05	4 20 33.49	3.409	2	.02	74 26 49.0	8.43
301	δ Tauri .....	...	1	.97	4 20 53.06	3.345	...	...	77 16	...
302	B.A.C. 1379 ...	7.5?	2	.04	4 21 21.61	10.144	2	.50	9 44 46.8	8.37
303	B.A.C. 1391 ...	...	...	...	4 22 26	...	2	.52	74 7 8.2	8.28
304	Piazzi iv. 96 ...	...	...	...	4 22 30	...	2	.06	53 33 58.0	8.28
305	83 Tauri .....	6.0	2	.05	4 22 37.88	3.361	1	.05	76 35 16.9	8.26
306	B.A.C. 1399 ...	8.0	2	.03	4 24 18.51	10.274	...	...	9 38	...
307	ρ Tauri .....	...	4	.05	4 25 47.62	3.389	...	...	75 27	...
308	B.A.C. 1417 ...	7.3	...	...	4 27 23	...	1	.07	70 24 54.7	7.88
309	Aldebaran .....	...	6	.21	4 27 46.57	3.434	2	.02	73 46 46.1	7.68
310	ν <sup>6</sup> Eridani .....	...	1	.04	4 27 56.92	2.358	...	...	120 3	...
311	B.A.C. 1428 ...	6.3	3	.04	4 29 48.06	7.906	1	.06	14 19 37.0	7.70
312	89 Tauri .....	...	...	...	4 30 2	...	2	.06	74 15 18.7	7.67
313	c <sup>1</sup> Tauri .....	4.8	...	...	4 30 13	...	3	.54	77 46 40.7	-7.65
314	σ <sup>3</sup> Tauri .....	5.5	1	.06	4 31 9.43	3.417	...	...	74 22	...
315	Radcliffe 1272 .	8.0	5	.28	4 31 11.82	+21.126	...	...	3 56	...

290. Called in previous sections 57 Tauri.

301. In the Ledger Results for Mean R.A. called 79 Tauri.

315. Identical with R.H.C. 662.

No.	Name of Star.	Mag.	Number of Obs. of R. A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N. P. D.	Fraction of the Year for Mean of Observations.	Mean N. P. D. 1858, Jan. 1.	Pre- cession in N. P. D.
					h. m. s.	s.			° ' "	"
316	* .....	7.6	1	.04	4 32 7.32	+2.741	1	.99	104 52 49.3	-7.50
317	$\tau^1$ Tauri .....	...	3	.55	4 33 41.16	3.590	1	.98	67 20 0.9	7.37
318	$\tau^2$ Tauri .....	5.2	3	.55	4 33 43.62	3.590	1	.07	67 19 9.7	7.37
319	B.A.C. 1450 .....	6.7	...	...	4 34 13	...	1	.06	114 45 49.2	7.33
320	54 Eridani .....	...	1	.05	4 34 14.10	2.619	...	...	109 57	...
321	4 Camelopard. .	5.7	...	...	4 36 12	...	2	.03	33 30 3.0	7.18
322	$\mu$ Eridani .....	...	1	.07	4 38 24.30	2.993	2	.02	93 31 6.0	6.99
323	B.A.C. 1471 .....	...	2	.97	4 38 32.65	2.409	1	.07	117 50 36.8	6.98
324	Piazzi iv. 189 ..	7.3	3	.05	4 39 43.68	3.193	...	...	84 28	...
325	58 Eridani .....	...	1	.08	4 41 13.90	2.681	1	.05	107 11 52.7	6.76
326	Radcliffe 1311 ..	...	1	.40	4 42 0.11	20.069	...	...	4 14	...
327	$\pi^1$ Orionis .....	...	3	.06	4 42 8.05	3.219	...	...	83 17	...
328	B.A.C. 1490 .....	7.4	...	...	4 42 50	...	3	.05	53 36 6.9	6.63
329	B.A.C. 1496 .....	6.7?	1	.03	4 44 22.57	7.493	1	.08	15 57 34.7	6.50
330	Radcliffe 1329 ..	8.4	3	.46	4 46 5.35	19.386	...	...	4 27	...
331	B.A.C. 1510 .....	6.5	3	.07	4 46 48.79	7.453	1	.09	16 9 5.9	6.30
332	$\pi^4$ Orionis .....	...	...	...	4 47 5	...	2	.03	80 4 43.4	6.27
333	$\epsilon$ Aurigæ .....	...	3	.04	4 47 45.02	3.893	...	...	57 4	6.20
334	B.A.C. 1522 .....	6.7	2	.05	4 48 28.71	6.013	3	.06	23 22 59.1	6.16
335	$\delta$ Eridani .....	...	...	...	4 49 25	...	1	.07	95 23 58.7	6.08
336	$\epsilon$ Aurigæ .....	...	2	.03	4 51 47.13	4.288	3	.67	46 23 30.2	5.88
337	* .....	7.8	3	.08	4 52 8.42	2.728	...	...	105 0	...
338	B.A.C. 1542 .....	7.0	...	...	4 52 31	...	1	.99	75 50 5.3	5.82
339	(R) Leporis .....	6.6	7	.20	4 53 8.67	2.727	2	.06	105 1 25.3	5.77
340	64 Eridani .....	5.7	1	.01	4 53 20.09	2.781	1	.07	102 45 1.4	5.75
341	B.A.C. 1549 .....	6.0	...	...	4 54 30	...	1	.07	16 14 54.5	5.66
342	$\iota$ Tauri .....	...	...	...	4 54 37	...	2	.01	68 36 59.2	5.65
343	Radcliffe 1377 ..	7.3	2	.07	4 56 3.32	19.512	3	.07	4 28 12.0	5.52
344	$\iota$ Orionis .....	...	...	...	4 56 27	...	1	.07	74 47 53.6	5.49
345	$\iota$ Leporis .....	...	1	.07	4 56 45.59	2.524	...	...	113 0	...
346	$m$ Tauri .....	5.6	...	...	4 59 3	...	2	.04	71 32 58.9	5.27
347	B.A.C. 1565 .....	5.7	1	.01	4 59 14.66	9.743	...	...	10 57	...
348	$\epsilon$ Leporis .....	...	3	.04	4 59 27.13	2.535	1	.07	112 33 55.0	5.17
349	$\iota$ Orionis .....	6.5	3	.09	4 59 51.66	3.282	1	.03	80 42 20.4	-5.21
350	$\beta$ Eridani .....	...	3	.04	5 0 52.26	+2.951	...	...	95 16	...

326, 330, 343. Identical with R.H.C. 698, 704, and 717, respectively.

335. Called in previous sections 62 Eridani.

220 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
351	$\lambda$ Orionis .....	6.0	2	.08	5 1 31.05	+3.290	1	.08	80 21 25.2	-5.06
352	$\lambda$ Eridani .....	...	2	.04	5 2 21.18	2.867	2	.01	98 56 23.3	4.99
353	12 Aurigæ .....	...	...	...	5 5 56	...	2	.01	43 45 4.2	4.69
354	B.A.C. 1615 ...	...	...	...	5 6 1	...	2	.54	120 24 4.0	4.68
355	Capella .....	...	3	.08	5 6 12.31	4.420	2	.13	44 9 6.1	4.23
356	$\mu$ Leporis .....	3.0	2	.05	5 6 33.43	2.688	2	.03	106 22 37.9	4.64
357	B.A.C. 1610 ...	7.1	2	.02	5 6 35.58	9.276	1	.06	11 50 29.4	4.63
358	Rigel .....	...	2	.52	5 7 42.96	2.879	...	...	98 22	...
359	16 Aurigæ .....	5.5	...	...	5 8 51	...	2	.08	56 46 52.1	4.44
360	$\lambda$ Aurigæ .....	5.6	3	.08	5 9 9.37	4.164	...	...	50 2	...
361	$\tau$ Orionis .....	3.7	1	.10	5 10 42.80	2.910	1	.08	97 0 5.0	4.28
362	$\pi$ Tauri .....	6.0	...	...	5 10 45	...	2	.03	68 3 16.3	4.28
363	$\epsilon$ Columbae ...	...	2	.05	5 12 22.07	2.153	...	...	125 2	...
364	B.A.C. 1661 ...	7.9	3	.08	5 14 37.68	3.149	1	.01	86 34 16.2	3.94
365	B.A.C. 1670 ...	...	...	...	5 15 56	...	1	.05	114 54 52.6	3.83
366	111 Tauri .....	5.8	2	.06	5 16 8.34	3.478	3	.08	72 45 8.1	3.82
367	B.A.C. 1678 ...	6.9	1	.99	5 16 38.24	3.047	2	.11	91 0 12.1	3.78
368	$\epsilon$ Orionis .....	5.0	...	...	5 17 7	...	1	.05	97 56 32.9	3.73
369	$\beta$ Tauri .....	...	...	...	5 17 19	...	2	.14	61 31 0.4	3.51
370	$\gamma$ Orionis .....	...	4	.06	5 17 30.94	3.214	...	...	83 47	...
371	B.A.C. 1696 ...	7.6	1	.10	5 19 5.45	3.135	1	.08	87 11 31.4	3.56
372	$\psi^2$ Orionis .....	5.0	2	.10	5 19 24.05	3.139	...	...	87 2	...
373	18 Camelopard.	6.7	...	...	5 20 24	...	2	.50	32 53 8.7	3.53
374	B.A.C. 1708 ...	...	...	...	5 20 28.	...	1	.03	102 1 25.2	3.44
375	B.A.C. 1706 ...	6.5	3	.06	5 20 45.78	7.968	1	.10	15 4 34.5	3.41
376	Groom. 956 ...	7.5	2	.51	5 21 20.52	18.872	...	...	4 46	...
377	B.A.C. 1713 ...	...	...	...	5 21 43	...	1	.02	116 42 19.6	3.33
378	B.A.C. 1718 ...	...	2	.06	5 22 33.90	2.229	...	...	122 32	...
379	$\chi$ Aurigæ .....	5.7	1	.14	5 23 29.29	3.899	2	.14	57 55 3.4	3.19
380	Radcliffe 1474 .	8.2	3	.01	5 23 35.59	31.095	2	.29	2 41 57.2	3.18
381	$\delta$ Orionis .....	...	...	...	5 24 45	...	2	.06	90 24 29.6	3.03
382	$\nu$ Orionis .....	4.5	...	...	5 25 4	...	4	.05	97 24 36.3	3.05
383	$\alpha$ Leporis .....	...	...	...	5 26 28	...	3	.09	107 55 36.0	2.93
384	22 Camelopard.	7.0	2	.08	5 27 6.14	+5.052	4	.18	33 43 38.2	2.87
385	21 Camelopard.	...	...	...	5 27 19	...	1	.14	28 8 27.0	-2.86

351. Called in previous sections 16 Orionis.

368. Called in previous sections 29 Orionis.

380. Identical with R.H.C. 783.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N. P. D.	Fraction of the Year for Mean of Observations.	Mean N. P. D. 1858, Jan. 1.	Pre- cession in N. P. D.
					h. m. s.	s.			° ' "	"
386	$\theta^1$ Orionis (1st).	7.4	4	.04	5 28 17.48	+2.943	5	.29	95 29 3.4	-2.77
387	$\theta^1$ Orionis (2d).	8.4	3	.06	5 28 17.70	2.943	...	...	95 29	...
388	$\theta^1$ Orionis (3d).	5.7	2	.54	5 28 18.12	2.943	...	...	95 29	...
389	$\theta^1$ Orionis (4th).	7.0	3	.07	5 28 18.90	2.943	...	...	95 29	...
390	$\theta^2$ Orionis (1st).	6.0	...	...	5 28 25	...	1	.06	95 30 48.1	2.76
391	$\zeta$ Tauri .....	...	2	.11	5 29 9.62	3.580	...	...	68 57	...
392	26 Aurigæ (2d).	5.7	...	...	5 29 31	...	2	.05	59 35 47.8	2.66
393	$\zeta$ Orionis .....	...	...	...	5 33 36	...	1	.11	92 1 17.4	2.31
394	B.A.C. 1796 ...	7.8	...	...	5 34 8	...	4	.03	71 5 9.5	2.26
395	$\alpha$ Columbeæ ...	...	2	.07	5 34 30.85	2.178	...	...	124 9	...
396	$\epsilon$ Aurigæ .....	6.3	2	.11	5 34 54.20	4.641	4	.19	40 14 28.6	2.19
397	B.A.C. 1809 ...	...	1	.09	5 36 15.24	2.191	...	...	123 28	...
398	B.A.C. 1808 ...	7.3	4	.05	5 36 24.22	3.427	2	.09	75 0 9.9	2.06
399	128 Tauri .....	7.3	...	...	5 36 42	...	3	.09	73 58 47.9	2.04
400	B.A.C. 1829 ...	7.3	...	...	5 39 13	...	3	.03	65 22 9.4	1.82
401	Lalande 10912.	8.0	2	.13	5 39 14.87	3.681	2	.14	65 23 40.7	1.82
402	$\kappa$ Orionis .....	...	1	.13	5 41 1.51	2.842	2	.09	99 43 25.1	1.66
403	B.A.C. 1850 ...	7.0	...	...	5 42 11	...	4	.06	57 55 15.9	1.55
404	B.A.C. 1859 ...	...	1	.09	5 42 38.74	2.189	...	...	123 28	...
405	137 Tauri .....	6.0	2	.02	5 44 18.37	3.406	1	.14	75 52 4.6	1.37
406	136 Tauri .....	5.5	4	.09	5 44 24.18	3.767	2	.07	62 25 33.0	1.36
407	B.A.C. 1865 ...	6.0?	1	.13	5 44 30.13	2.280	3	.12	120 39 51.4	1.35
408	$\beta$ Columbeæ ...	...	1	.09	5 45 57.45	2.107	...	...	125 50	...
409	$\chi^1$ Orionis .....	5.3	...	...	5 45 59	...	2	.09	69 45 14.5	1.23
410	B.A.C. 1874 ...	7.5	...	...	5 46 4	...	4	.13	23 0 27.3	1.22
411	$\alpha$ Orionis .....	...	1	.03	5 47 28.98	3.246	...	...	82 37	...
412	B.A.C. 1881 ...	6.8	2	.07	5 47 35.68	6.198	1	.13	23 7 6.8	1.09
413	$\delta$ Aurigæ .....	...	2	.11	5 47 50.41	4.926	1	.15	35 43 56.1	1.06
414	$\beta$ Aurigæ .....	...	...	...	5 49 7	...	3	.09	45 4 19.3	0.95
415	139 Tauri .....	5.5	3	.08	5 49 11.00	3.720	1	.07	64 4 3.8	0.95
416	Groom. 1004 ...	6.5	7	.24	5 49 20.88	26.679	...	...	3 14	...
417	$\eta$ Leporis .....	...	2	.09	5 49 56.27	2.733	...	...	104 12	...
418	$\theta$ Aurigæ .....	...	...	...	5 50 2	...	1	.06	52 48 6.8	0.87
419	59 Orionis .....	6.5	3	.07	5 51 1.99	3.113	2	.09	88 10 52.5	-0.78
420	140 Tauri .....	7.8	2	.13	5 51 51.78	+3.635	...	...	67 7	...



222 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
421	38 Aurigæ.....	6·8	2	·06	5 53 3'70	+4·313	2	·07	47 5 21·3	-0·61
422	$\chi^3$ Orionis.....	6·3	...	...	5 55 3	...	2	·05	70 18 39·3	0·43
423	1 Geminorum .	4·6	...	...	5 55 29	...	3	·09	66 44 0·1	0·40
424	66 Orionis.....	6·2	3	·09	5 57 28·43	3·168	2	·10	85 50 12·7	0·22
425	2 Geminorum .	7·1	2	·01	5 58 9·37	3·656	3	·08	66 21 9·1	0·16
426	36 Camelopard.	5·5	2	·08	5 58 33·77	6·037	2	·08	24 15 39·7	0·13
427	$\nu$ Orionis.....	...	...	...	5 59 28	...	2	·06	75 13 6·8	-0·03
428	41 Aurigæ (1st)	8·0	...	...	6 0 44	...	1	·10	41 15 46·8	+0·06
429	41 Aurigæ (2d)	...	...	...	6 0 44	...	1	·16	41 15 56·6	0·06
430	7 Geminorum .	4·3	4	·05	6 6 18·40	3·626	2	·04	67 27 19·9	0·55
431	$\kappa$ Aurigæ.....	...	2	·14	6 6 19·84	3·828	1	·14	60 27 13·0	0·55
432	71 Orionis.....	5·5	1	·03	6 6 29·55	3·536	1	·03	70 47 58·9	0·57
433	42 Aurigæ.....	7·0	...	...	6 6 59	...	1	·09	43 32 2·9	0·61
434	2 Lyncis.....	5·0	...	...	6 7 6	...	1	·10	30 56 37·8	0·62
435	72 Orionis.....	5·8	2	·07	6 7 13·81	3·459	1	·05	73 49 4·0	0·63
436	R.H.C. 889 ...	9·3	2	·56	6 7 17·75	22·539	4	·14	3 55 36·6	0·64
437	43 Aurigæ.....	6·5	1	·05	6 7 41·39	4·475	...	...	43 35	...
438	5 Monocerotis .	...	1	·11	6 7 55·86	2·925	...	...	96 14	...
439	B.A.C. 2014 ...	7·0	...	...	6 8 2	...	1	·02	54 48 29·1	0·70
440	$k^3$ Orionis.....	6·0	1	·13	6 8 28·34	3·362	...	...	77 42	...
441	3 Lyncis.....	...	...	...	6 8 58	...	1	·03	28 10 54·3	0·79
442	1 Orionis.....	6·5	1	·14	6 9 16·87	3·306	1	·11	80 0 35·9	0·81
443	45 Aurigæ.....	5·9	4	·07	6 10 13·68	4·877	1	·05	36 29 20·9	0·89
444	R.H.C. 897 ...	8·4	2	·59	6 11 39·68	34·282	...	...	2 27	...
445	$\mu$ Geminorum .	...	3	·04	6 14 22·11	3·632	...	...	67 25	...
446	$\zeta$ Canis Majoris.	...	...	...	6 14 52	...	4	·15	120 0 9·9	1·30
447	$\beta$ Canis Majoris	...	3	·06	6 16 26·92	2·640	1	·02	107 53 20·7	1·43
448	B.A.C. 2070 ...	8·4	...	...	6 17 44	...	3	·06	78 43 37·9	1·55
449	B.A.C. 2072 ...	...	1	·09	6 17 53·02	2·274	1	·10	120 52 22·9	1·56
450	Lalande 12274.	7·5	...	...	6 17 58	...	2	·06	78 47 54·1	1·58
451	R.H.C. 920 ...	9·5	1	·58	6 18 25·86	22·274	2	·14	3 58 12·7	1·61
452	6 Lyncis.....	6·3	1	·08	6 18 26·87	5·225	2	·04	31 44 20·8	1·61
453	B.A.C. 2076 ...	8·0	...	...	6 19 2	...	1	·05	55 25 30·6	1·67
454	48 Aurigæ.....	5·6	1	·14	6 19 26·40	3·858	1	·14	59 25 26·4	1·70
455	78 Orionis.....	6·0	2	·10	6 19 59·97	+3·066	1	·15	90 11 40·1	+1·75

440. Called in previous sections 74 Orionis.

442. Called in Observations of N.P.D. 75 Orionis.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
456	ν Geminorum .	...	2	'09	6 20 31'85	+3'563	...	...	69 42	...
457	B.A.C. 2095 ...	5'6	...	...	6 21 58	...	2	'15	10 17 39'0	+1'93
458	7 Lyncis .....	6'7	1	'02	6 22 43'71	5'003	...	...	34 33	...
459	9 Lyncis .....	7'0	2	'05	6 24 3'01	5'079	2	'08	33 30 29'3	2'10
460	8 Lyncis .....	6'1	2	'07	6 24 42'24	5'530	1	'13	28 24 4'0	2'16
461	10 Lyncis .....	7'3	2	'03	6 25 33'41	5'527	2	'06	28 24 42'1	2'23
462	B.A.C. 2147 ...	...	3	'12	6 27 20'52	2'243	...	...	121 56	...
463	41 Camelopard.	7'0	1	'03	6 27 22'94	5'572	2	'07	27 57 41'9	2'39
464	51 Aurigæ .....	6'0	...	...	6 28 49	...	4	'08	50 29 18'7	2'52
465	ξ <sup>2</sup> Canis Maj. .	...	1	'05	6 29 6'43	2'512	2	'15	112 51 18'9	2'54
466	B.A.C. 2162 ...	...	3	'12	6 29 19'67	2'222	...	...	122 36	...
467	γ Geminorum .	...	2	'04	6 29 30'54	3'466	...	...	73 29	...
468	B.A.C. 2175 (1)	7'3	2	'03	6 32 17'47	5'325	...	...	30 25	...
469	B.A.C. 2175 (2)	9'6	3	'09	6 32 18'25	5'325	...	...	30 25	...
470	B.A.C. 2183 ...	...	2	'10	6 32 28'93	2'237	...	...	122 13	...
471	Cephei 51 (Hev)	5'5	12	'37	6 32 38'87	30'476	...	...	2 45	...
472	12 Lyncis (1st)	var.	2	'05	6 33 39'94	5'323	3	'13	30 25 8'6	2'93
473	12 Lyncis (2d).	5'5	1	'07	6 33 40'94	5'323	2	'05	30 25 16'2	2'93
474	13 Lyncis .....	5'8	2	'15	6 34 42'75	5'131	2	'37	32 41 22'9	3'03
475	ε Geminorum .	...	2	'12	6 35 11'68	3'695	...	...	64 44	...
476	56 Aurigæ (1st)	6'0	2	'07	6 36 29'98	4'333	...	...	46 17	...
477	56 Aurigæ (2d)	var.	2	'05	6 36 31'71	4'333	3	'11	46 16 18'2	3'19
478	ξ Geminorum .	...	1	'14	6 37 19'05	3 377	1	'11	76 57 16'5	3'26
479	43 Camelopard.	5'4	2	'04	6 38 22'12	6'514	2	'39	20 57 16'4	3'34
480	Sirius.....	...	4	'13	6 38 53'46	2'645	...	...	106 31	...
481	17 Monocerotis	6'0	...	...	6 39 37	...	1	'10	81 48 49'7	3'45
482	B.A.C. 2217 ...	7'2	4	'15	6 39 51'87	2'575	1	'05	110 37 41'0	3'47
483	* .....	9'0	...	...	6 40 20	...	1	'05	49 53 24'9	3'51
484	58 Aurigæ .....	5'5	2	'10	6 40 43'33	4'253	...	...	48 3	...
485	59 Aurigæ .....	6'5	2	'09	6 43 15'01	4'135	3	'11	50 57 59'1	3'77
486	60 Aurigæ .....	6'0	...	...	6 43 29	...	4	'14	51 23 22'6	3'78
487	B.A.C. 2244 ...	7'5?	2	'04	6 44 25'53	2'397	...	...	117 10	...
488	15 Lyncis .....	5'0	...	...	6 44 58	...	1	'13	31 23 50'2	3'91
489	38 Geminorum.	5'4	2	'08	6 46 37'95	+3'382	1	'15	76 38 43'5	4'05
490	B.A.C. 2266 ...	5'6	...	...	6 47 55	...	3	'12	118 20 56'0	+4'16

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No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
491	62 Aurigæ .....	6.5	1	.13	6 49 22.04	+4.100	4	.08	51 45 27.2	+4.29
492	19 Canis Maj. .	4.6	...	...	6 49 28	...	2	.15	109 57 31.5	4.30
493	39 Geminorum.	6.6	2	.14	6 50 2.18	3.714	2	.12	63 44 11.9	4.34
494	ε Canis Majoris	...	1	.03	6 53 2.92	2.358	...	...	118 47	...
495	R.H.C. 1012 ...	9.7	...	...	6 54 50	...	2	.09	5 28 33.0	4.75
496	B.A.C. 2303 ...	...	2	.09	6 55 24.61	2.443	...	...	115 49	...
497	B.A.C. 2304 ...	6.5	...	...	6 55 33	...	2	.17	80 39 32.4	4.83
498	ζ Geminorum .	...	2	.07	6 55 41.06	3.562	1	.07	69 13 31.9	4.83
499	22 Canis Maj. .	...	2	.13	6 56 3.94	2.389	...	...	117 44	...
500	B.A.C. 2311 ...	7.6	...	...	6 56 24	...	2	.15	94 3 42.6	4.88
501	γ Canis Maj....	4.5	1	.07	6 57 20.12	2.716	1	.10	105 25 36.1	4.96
502	B.A.C. 2317 ...	6.5	3	.13	6 58 14.63	11.734	...	...	8 30	...
503	(R) Geminorum	var.	...	...	6 58 50	...	2	.13	67 4 52.6	5.10
504	B.A.C. 2331 ...	7.3	2	.10	7 0 16.25	3.827	1	.14	59 37 50.0	5.21
505	(R) Canis Min.	var.	1	.05	7 0 53.88	3.304	...	...	79 45	...
506	τ Geminorum .	...	2	.07	7 2 5.87	3.828	2	.07	59 31 34.6	5.37
507	R.H.C. 1029 ...	7.5	2	.13	7 2 24.14	16.376	2	.17	5 31 42.4	5.39
508	δ Canis Majoris	3.0	...	...	7 2 37	...	1	.10	116 10 14.2	5.41
509	B.A.C. 2347 ...	7.6	4	.16	7 3 10.28	3.429	1	.15	74 26 13.9	5.46
510	20 Monocerotis	5.7	1	.18	7 3 10.47	2.980	1	.13	94 1 11.0	5.46
511	18 Lyncis .....	5.6	4	.12	7 3 29.75	5.288	...	...	30 7	...
512	Piazzi vii. 9 ...	9.0	...	...	7 4 32	...	2	.16	73 40 54.7	5.57
513	B.A.C. 2359 ...	7.8	2	.15	7 4 42.42	3.425	...	...	74 35	...
514	52 Geminorum.	6.4	2	.10	7 6 0.70	3.672	1	.11	64 52 20.8	5.70
515	44 Camelopard.	...	1	.07	7 6 19.67	5.217	...	...	30 50	...
516	Lalande 14038.	7.3	...	...	7 7 5	...	1	.18	67 47 27.7	5.79
517	Groom. 1119 ...	7.3	2	.63	7 7 34.75	78.363	...	...	0 58	...
518	B.A.C. 2383 ...	6.9	3	.15	7 8 15.40	3.720	...	...	63 3	...
519	27 Canis Maj. .	4.0?	...	...	7 8 28	...	1	.15	116 6 39.2	5.91
520	B.A.C. 2377 ...	6.8	3	.16	7 8 36.61	11.298	...	...	8 50	...
521	B.A.C. 2390 (2)	8.3	...	...	7 9 25	...	2	.14	16 39 9.5	5.98
522	47 Camelopard.	6.3	1	.16	7 9 49.76	5.294	1	.57	29 50 25.5	6.02
523	B.A.C. 2399 ...	...	1	.18	7 9 51.52	2.321	...	...	120 26	...
524	λ Geminorum .	4.3	2	.14	7 9 55.81	3.455	2	.14	73 12 26.0	6.03
525	δ Geminorum .	...	2	.07	7 11 38.37	+3.592	3	.10	67 45 37.4	+6.17

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
526	B.A.C. 2420 ...	...	4	'15	7 13 4'02	+2'322	3	'17	120 32 31'2	+6'29
527	B.A.C. 2443 ...	...	2	'13	7 16 45'69	2'272	...	...	122 19	...
528	ε Geminorum...	4'4	5	'10	7 16 54'12	3'744	5	'14	61 55 25'3	6'60
529	B.A.C. 2453 ...	...	2	'11	7 18 8'60	2'338	1	'18	120 10 33'9	6'71
530	22 Lyncis .....	5'8	2	'12	7 19 8'29	4'568	1	'14	40 2 23'3	6'79
531	β Canis Min. .	...	...	...	7 19 27	...	1	'11	81 25 41'6	6'81
532	ρ Geminorum .	4'7	...	...	7 19 58	...	1	'18	57 56 13'0	6'85
533	B.A.C. 2466 ...	...	2	'14	7 20 16'16	2'302	...	...	121 28	...
534	B.A.C. 2470 ...	6'7	...	...	7 21 12	...	1	'15	101 16 18'2	6'96
535	(S) Canis Min.	10'5	...	...	7 25 0	...	1	'18	81 22 53'4	7'27
536	α <sup>1</sup> Geminorum.	...	4	'15	7 25 31'60	3'843	...	...	57 48	...
537	Castor .....	...	1	'19	7 25 32'19	3'843	...	...	57 48 16'2	7'31
538	B.A.C. 2489 ...	6'1	2	'15	7 26 7'10	3'826	2	'15	58 44 3'9	7'36
539	ν Geminorum .	4'6	2	'16	7 27 10'13	3'709	1	'15	62 47 32'2	7'45
540	23 Lyncis .....	6'7	2	'12	7 29 3'57	5'005	3	'13	32 35 54'6	7'60
541	70 Geminorum.	6'3	3	'17	7 29 13'31	3'949	...	...	54 38	...
542	o Geminorum .	5'7	2	'12	7 29 53'43	3'933	1	'18	55 5 38'4	7'67
543	Radcliffe 1979 .	8'3	2	'60	7 29 57'52	24'984	2	'13	3 14 1'6	7'68
544	B.A.C. 2517 ...	7'0	2	'18	7 30 48'84	3'852	...	...	57 40	...
545	Procyon.....	...	4	'13	7 31 52'06	3'145	...	...	84 25	...
546	W.B. vii. 990 .	8'0	1	'22	7 32 14'29	3'192	...	...	84 24	...
547	σ Geminorum .	5'1	4	'14	7 34 25'98	3'756	1	'11	60 46 37'6	8'03
548	* .....	8'5	2	'12	7 34 31'48	3'607	1	'15	66 23 24'7	8'04
549	Pollux .....	...	6	'14	7 36 37'28	3'683	2	'10	61 38 4'7	8'21
550	Radcliffe 2020 .	7'6	5	'63	7 38 12'38	20'879	4	'14	3 54 26'8	8'34
551	B.A.C. 2590 ...	5'0	...	...	7 42 15	...	3	'17	10 8 33'4	8'65
552	Groom. 1359 ...	6'7	7	'16	7 42 22'73	15'488	2	'17	5 32 48'2	8'66
553	Lalande 15277 .	...	...	...	7 42 53	...	1	'09	114 36 39'2	8'71
554	B.A.C. 2599 ...	5'7	2	'09	7 43 3'98	2'521	...	...	114 33	...
555	ξ Argus .....	...	3	'16	7 43 19'46	2'522	...	...	114 30	...
556	φ Geminorum .	...	1	'11	7 44 48'04	3'685	...	...	62 52	...
557	9 Puppis .....	5'8	...	...	7 45 12	...	2	'14	103 31 27'9	8'89
558	B.Z. 279. 165 .	8'8	2	'22	7 46 45'23	3'554	1	'22	67 57 39'2	9'01
559	B.A.C. 2651 ...	...	...	...	7 50 44	...	3	'14	119 54 30'5	9'32
560	Radcliffe 2056 .	8'1	1	'58	7 51 26'59	+15'204	1	'18	5 33 52'1	+9'37

543, 550, 560. Identical with R.H.C. 1097, 1123, and 1153, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
561	B.A.C. 2655 ...	...	...	...	7 52 1	...	1	'17	119 57 19'8	+ 9'41
562	B.A.C. 2658 ...	7'5	...	...	7 52 30	...	1	'15	71 22 6'6	9'46
563	* .....	8'2	3	'15	7 53 43'12	+2'444	...	...	118 5	...
564	28 Monocerotis ...	...	...	...	7 54 0	...	1	'11	91 0 6'0	9'57
565	6 Cancri .....	5'5	...	...	7 54 48	...	3	'15	61 48 39'0	9'63
566	B.A.C. 2673 ...	5'2	3	'14	7 54 52'65	3'127	2	'11	87 16 44'7	9'64
567	Radcliffe 2069 ...	8'7	...	...	7 56 1	...	2	'15	4 18 57'5	9'73
568	B.A.C. 2703 ...	7'6	...	...	7 58 11	...	2	'18	67 8 20'0	9'89
569	15 Argus ( $\rho$ ) ...	...	...	...	8 1 30	...	2	'10	113 53 54'4	10'15
570	$\psi^3$ Cancri .....	5'9	6	'15	8 1 53'71	3'631	3	'21	64 3 54'9	10'17
571	B.A.C. 2734 ...	7'0	2	'18	8 2 44'00	3'814	1	'17	57 6 1'1	10'24
572	$\zeta^1$ Cancri .....	...	2	'12	8 4 3'97	3'445	1	'14	71 55 34'1	10'33
573	$\zeta^2$ Cancri .....	6'2	2	'17	8 4 4'16	3'445	1	'19	71 55 46'1	10'33
574	18 Puppis .....	7'0	2	'20	8 4 4'82	2'798	...	...	103 23	...
575	* .....	6'4	3	'10	8 4 55'32	3'419	3	'15	73 3 47'9	10'40
576	Radcliffe 2099 ...	8'3	1	'64	8 5 55'58	20'548	...	...	3 44	...
577	(R) Cancri .....	var.	5	'17	8 8 43'98	3'315	3	'18	77 50 26'8	10'68
578	$\beta$ Cancri .....	...	...	...	8 8 49	...	1	'07	80 22 47'8	10'69
579	$\chi$ Cancri .....	5'0	...	...	8 11 26	...	1	'18	62 19 34'7	10'89
580	B.A.C. 2788 ...	...	...	...	8 12 4	...	1	'22	68 48 28'2	10'92
581	31 Lyncis .....	5'2	...	...	8 13 6	...	2	'18	46 21 36'4	11'00
582	Groom. 1418 ...	...	1	'22	8 13 33'82	17'390	...	...	4 27	...
583	Radcliffe 2129 ...	8'7	...	...	8 15 31	...	2	'16	4 18 54'3	11'18
584	B.A.C. 2810 ...	7'3	...	...	8 16 40	...	1	'18	72 21 25'8	11'26
585	Groom. 1437 ...	6'6	3	'17	8 17 41'57	4'217	3	'14	43 52 19'9	11'34
586	$d^2$ Cancri .....	...	...	...	8 17 47	...	1	'14	72 29 19'2	11'34
587	$v^1$ Cancri (1st) ...	7'4	4	'20	8 18 12'80	3'584	1	'24	65 0 9'1	11'37
588	$v^1$ Cancri (2d) ...	8'0	...	...	8 18 13	...	1	'22	65 0 3'6	11'37
589	27 Cancri .....	6'0	...	...	8 18 53	...	1	'15	76 52 48'4	11'42
590	B.A.C. 2827 ...	6'0	1	'15	8 18 56'09	2'591	...	...	113 35	...
591	B.A.C. 2828 ...	9'3	1	'15	8 18 59'09	2'591	1	'18	113 35 14'9	11'43
592	$\eta$ Cancri .....	5'9	3	'16	8 24 29'53	3'480	2	'15	69 4 45'1	11'82
593	Radcliffe 2162 ...	7'8	2	'18	8 25 48'22	14'047	2	'17	5 35 43'9	11'92
594	B.A.C. 2883 ...	...	...	...	8 27 19	...	3	'18	121 2 54'0	12'02
595	B.A.C. 2898 ...	6'4	2	'14	8 29 27'79	+2'544	2	'21	116 21 22'4	+12'17

567, 576, 583, 593. Identical with R.H.C. 1161, 1190, 1213, and 1233, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
596	Radcliffe 2189 .	...	1	·65	8 34 37·01	+18·398	...	...	3 54	...
597	γ Cancri .....	4·5	4	·12	8 35 3·86	3·492	3	·15	68 1 25·3	+12·56
598	Σ 1263 (1st)...	8·3	3	·16	8 35 47·35	4·014	3	·19	47 47 13·6	12·61
599	Σ 1263 (2d)...	9·5	...	...	8 35 48	...	2	·23	47 46 49·4	12·61
600	Radcliffe 2198 .	8·4	1	·21	8 37 43·79	15·485	1	·18	4 45 20·5	12·74
601	Σ 1280 (1st)...	8·0	3	·14	8 41 57·41	3·304	2	·15	18 39 38·2	13·03
602	Σ 1280 (2d)...	8·4	3	·15	8 41 58·00	3·304	...	...	18 40	...
603	ρ <sup>1</sup> Cancri .....	6·4	3	·13	8 43 55·87	3·625	...	...	61 13	...
604	ρ <sup>2</sup> Cancri .....	6·4	3	·13	8 44 7·92	3·626	...	...	61 8	...
605	6 Ursæ Majoris	6·4	2	·22	8 44 24·15	5·245	...	...	24 51	...
606	R.H.C. 1285 ...	9·0	1	·22	8 44 44·01	14·831	...	...	4 53	...
607	B.A.C. 3025 ...	6·2	2	·18	8 47 12·12	4·109	1	·24	43 49 39·5	13·37
608	60 Cancri .....	6·0	2	·12	8 48 10·05	3·285	3	·14	77 50 0·9	13·43
609	17 Hydræ (N) .	7·7	1	·22	8 48 32·00	2·942	...	...	97 26	...
610	17 Hydræ (S) .	7·4	3	·20	8 48 32·04	2·942	2	·22	97 25 53·6	13·46
611	(T) Hydræ ...	var.	5	·15	8 48 45·36	2·921	3	·15	98 36 7·0	13·47
612	ε Ursæ Majoris	...	1	·13	8 49 28·14	4·145	2	·18	41 24 14·6	13·79
613	B.A.C. 3059 ...	...	...	...	8 51 25	...	1	·13	47 39 27·3	13·64
614	B.A.C. 3076 ...	6·2	3	·14	8 54 1·43	3·176	2	·14	83 48 19·0	13·81
615	ν Cancri.....	5·8	3	·12	8 54 25·81	3·522	1	·07	64 59 29·7	13·83
616	B.A.C. 3104 ...	7·8	4	·15	8 58 28·61	3·341	...	...	74 10	...
617	f Ursæ Majoris	4·4	...	...	8 58 50	...	2	·22	37 49 32·6	14·11
618	τ Ursæ Majoris	5·4	1	·18	8 59 10·15	5·024	1	·24	25 54 46·6	14·13
619	75 Cancri .....	6·7	...	...	9 0 26	...	1	·14	62 47 9·7	14·21
620	ξ Cancri.....	5·8	3	·20	9 1 11·32	3·463	2	·19	67 22 57·1	14·26
621	π <sup>1</sup> Cancri .....	6·7	1	·15	9 4 31·25	3·329	1	·18	74 26 4·2	14·46
622	Σ 1321 (1st)...	7·4	3	·18	9 4 40·58	4·313	1	·18	36 42 30·4	14·47
623	Σ 1321 (2d)...	7·6	3	·19	9 4 42·49	4·313	...	...	36 42	...
624	B.A.C. 3144 ...	6·5	1	·22	9 6 30·73	3·719	...	...	54 47	...
625	π <sup>3</sup> Cancri .....	6·0	2	·17	9 7 23·21	3·325	3	·19	74 28 20·0	14·63
626	20 Ursæ Maj. .	7·5	...	...	9 9 35	...	2	·16	29 37 25·5	14·77
627	B.A.C. 3169 ...	6·0	...	...	9 10 51	...	2	·21	38 8 36·3	14·83
628	Radcliffe 2295 .	8·4	1	·23	9 11 3·08	25·879	3	·24	2 15 12·7	14·85
629	83 Cancri .....	6·8	3	·18	9 11 3·17	3·357	2	·18	71 41 42·6	+15·01
630	Radcliffe 2320 .	8·8	4	·23	9 15 46·94	+12·126	...	...	5 32	...

596, 600, 628, 630. Identical with R.H.C. 1259, 1268, 1361, and 1379, respectively.  
621. Observed in N.P.D. by Reflexion. This is omitted to be stated in the Ledger Results.

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No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
631	B.A.C. 3199 ...	...	...	...	9 16 30	...	1	·18	8 3 10·1	+15·16
632	41 Lyncis (1st)	5·8	2	·21	9 19 20·46	+3·970	2	·20	43 46 45·0	15·33
633	41 Lyncis (2d).	7·5	...	...	9 19 21	...	2	·19	43 48 4·1	15·33
634	λ Ursæ Majoris	4·0	3	·18	9 20 17·33	4·806	1	·27	26 19 14·5	15·38
635	B.A.C. 3226 ...	6·2	2	·22	9 20 44·67	2·989	...	...	95 27	...
636	3 Leonis .....	6·3	...	...	9 20 55	...	1	·22	81 11 40·2	15·41
637	Lalande 18631.	7·7	...	...	9 21 20	...	1	·23	55 49 49·8	15·44
638	22 Ursæ Maj.	6·0	2	·23	9 21 24·56	5·832	...	...	17 10	...
639	τ <sup>1</sup> Hydræ (N).	7·3	1	·22	9 21 56·75	3·039	...	...	92 9	...
640	7 Leonis Min.	6·4	2	·21	9 22 7·66	3·650	...	...	55 43	...
641	Radcliffe 2343.	8·2	4	·69	9 22 49·59	11·736	...	...	5 35	...
642	8 Leonis Min.	5·8	3	·21	9 22 53·24	3·680	...	...	54 16	...
643	Radcliffe 2346.	9·5	2	·71	9 23 36·27	11·635	...	...	5 37	...
644	B.A.C. 3245 ...	7·5	3	·18	9 23 54·21	5·776	...	...	17 17	...
645	Radcliffe 2350.	9·3	2	·71	9 24 22·49	11·563	...	...	5 38	...
646	Radcliffe 2355.	...	...	...	9 25 6	...	1	·22	6 1 20·7	15·65
647	11 Leonis Min.	6·0	...	...	9 27 8	...	1	·25	53 32 59·5	15·76
648	33 Hydræ .....	6·0	...	...	9 27 28	...	2	·20	95 17 1·1	15·77
649	Radcliffe 2368.	7·8	3	·24	9 30 53·89	19·890	1	·22	2 45 9·1	15·96
650	12 Leonis .....	7·3	2	·16	9 31 2·55	3·465	3	·19	63 59 42·0	15·96
651	ε Hydræ .....	4·7	5	·23	9 32 36·17	3·064	1	·27	90 30 2·0	16·05
652	f Leonis .....	6·0	2	·16	9 35 13·36	3·538	...	...	59 22	...
653	14 Leonis Min.	7·0?	1	·22	9 37 36·51	3·870	...	...	44 14	...
654	ε Leonis .....	...	...	...	9 37 47	...	1	·18	65 34 26·0	16·34
655	18 Leonis .....	6·0	...	...	9 38 44	...	3	·21	77 32 16·4	16·36
656	15 Leonis Min.	6·0	...	...	9 39 25	...	1	·25	43 19 12·7	16·40
657	19 Leonis .....	6·7	2	·22	9 39 47·73	3·237	2	·23	77 46 37·8	16·42
658	(R) Leonis .....	var.	3	·22	9 39 55·14	3·235	...	...	77 55	...
659	ν Ursæ Majoris	...	2	·17	9 40 51·48	4·376	1	·21	30 17 44·4	16·47
660	μ Leonis .....	...	4	·24	9 44 40·80	3·444	2	·18	63 19 33·1	16·66
661	7 Sextantis ...	6·5	3	·18	9 44 52·63	3·111	...	...	86 53	...
662	Radcliffe 2404.	6·5	5	·75	9 45 13·50	10·906	1	·27	5 24 9·2	16·69
663	B.A.C. 3393 ...	7·5?	...	...	9 48 36	...	1	·17	14 33 47·7	16·85
664	ν Leonis .....	5·5	3	·25	9 50 34·86	3·237	2	·23	76 52 46·6	16·94
665	π Leonis .....	5·2	5	·21	9 52 42·42	+3·177	2	·22	81 16 34·3	+17·07

641, 643, 645, 646, 649, 662. Identical with R.H.C. 1393, 1399, 1402, 1407, 1418, and 1451, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
666	13 Sextantis ...	6.7	...	...	9 56 47	...	2	.18	86 6 35.9	+17.23
667	21 Leonis Min.	5.3	...	...	9 59 3	...	1	.22	54 3 55.3	17.33
668	B.A.C. 3452 ...	6.0?	...	...	9 59 25	...	1	.27	120 12 4.2	17.35
669	7 Leonis .....	...	...	...	9 59 35	...	1	.21	72 32 47.5	17.35
670	Regulus .....	...	7	.22	10 0 48.37	+3.203	1	.23	77 20 25.4	17.40
671	Groom. 1618 ...	6.4	3	.18	10 2 39.38	3.855	3	.24	39 49 46.7	17.48
672	34 Leonis .....	6.5	...	...	10 4 0	...	2	.19	75 56 43.0	17.54
673	B.A.C. 3476 ...	...	...	...	10 4 12	...	1	.19	96 37 8.4	17.55
674	23 Leonis Min.	6.0	2	.21	10 8 9.96	3.433	...	...	59 59	...
675	Groom. 1620 ...	6.0	1	.20	10 8 20.87	10.174	...	...	5 0	...
676	24 Leonis Min.	7.0	2	.22	10 8 24.77	3.423	...	...	60 37	...
677	λ Ursæ Majoris ...	...	1	.29	10 8 31.18	3.667	...	...	46 23	...
678	35 Leonis .....	6.3	3	.20	10 8 40.19	3.351	1	.21	65 47 33.4	17.74
679	37 Leonis .....	6.3	1	.30	10 9 3.17	3.231	...	...	75 34	...
680	39 Leonis .....	6.3	4	.26	10 9 25.50	3.344	1	.22	66 10 59.6	17.77
681	B.A.C. 3515 ...	6.5	...	...	10 10 12	...	1	.30	45 13 53.5	17.80
682	γ <sup>1</sup> Leonis .....	...	...	...	10 12 8	...	2	.28	69 26 29.6	18.02
683	B.A.C. 3528 ...	5.3	2	.21	10 13 22.66	8.158	...	...	6 43	...
684	μ Ursæ Majoris ...	...	2	.22	10 13 51.17	3.613	...	...	47 47	...
685	Radcliffe 2483 .	7.7	...	...	10 13 57	...	1	.23	4 52 46.3	17.95
686	42 Leonis .....	6.5	3	.27	10 14 11.92	3.238	...	...	74 19	...
687	30 Leonis Min.	5.7	5	.26	10 17 45.83	3.468	...	...	55 29	...
688	B.A.C. 3563 ...	6.0	...	...	10 18 39	...	2	.25	96 20 43.6	18.12
689	B.A.C. 3566 ...	8.0	1	.23	10 19 10.51	3.014	...	...	95 42	...
690	μ Hydræ .....	...	...	...	10 19 14	...	1	.25	106 6 45.3	18.14
691	B.A.C. 3567 ...	6.5	3	.22	10 19 16.79	3.738	1	.24	40 27 32.2	18.15
692	β Leonis Min. .	...	...	...	10 19 40	...	1	.28	52 33 59.4	18.17
693	45 Leonis .....	7.0?	1	.30	10 20 8.79	3.175	...	...	79 31	...
694	36 Ursæ Maj. .	5.0	3	.26	10 21 30.85	3.918	...	...	33 18	...
695	Radcliffe 2507 .	...	...	...	10 24 27	...	1	.22	4 31 10.0	18.34
696	ρ Leonis .....	4.5	...	...	10 25 20	...	4	.27	79 57 49.5	18.40
697	37 Ursæ Maj. .	5.5	...	...	10 25 59	...	2	.29	32 11 14.9	18.39
698	48 Leonis .....	5.0?	...	...	10 27 24	...	1	.20	82 18 59.6	+18.44
699	B.A.C. 3627 ...	7.0?	3	.24	10 28 12.55	2.855	...	...	112 26	...
700	B.A.C. 3628 ...	8.0?	1	.30	10 28 39.73	+3.141	...	...	82 13	...

685, 695. Identical with R.H.C. 1540 and 1566 respectively.



230: *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
701	B.A.C. 3629 ...	6.5	1	.22	10 29 14.52	+6.328	2	.23	8 50 6.4	+18.50
702	38 Leonis Min. ...	...	...	...	10 31 0	...	1	.30	51 21 12.0	18.57
703	B.A.C. 3645 ...	6.0	2	.23	10 31 38.86	4.393	...	...	20 49	...
704	38 Ursæ Maj. .	5.3	2	.27	10 32 13.06	4.218	...	...	23 32	...
705	B.A.C. 3652 ...	5.2	...	...	10 32 50	...	1	.30	20 10 58.0	18.62
706	33 Sextantis ...	6.7	2	.30	10 34 10.80	3.062	...	...	91 0	...
707	(R) Ursæ Maj..	7.9	6	.23	10 34 32.35	4.375	...	...	20 28	...
708	B.A.C. 3665 ...	6.0	...	...	10 35 11	...	3	.24	43 3 4.6	18.70
709	34 Sextantis ...	...	...	...	10 35 18	...	1	.29	85 40 34.6	18.70
710	κ Leonis .....	5.7	...	...	10 38 54	...	1	.30	74 3 23.1	18.81
711	Radcliffe 2560 .	8.8	8	.53	10 41 6.07	8.344	...	...	4 53	...
712	l Leonis.....	5.8	5	.23	10 41 47.50	3.159	4	.27	78 49 15.1	18.92
713	ν Hydræ .....	...	...	...	10 42 37	...	2	.30	105 27 8.0	18.92
714	47 Leonis Min.	6.5	...	...	10 47 4	...	2	.23	55 12 30.0	19.05
715	B.A.C. 3741 ...	5.8	1	.22	10 47 51.76	3.353	1	.30	55 44 8.1	19.07
716	55 Leonis .....	6.1	2	.30	10 48 24.13	3.082	3	.29	88 30 24.9	19.08
717	B.A.C. 3747 ...	6.3	2	.25	10 48 27.93	5.094	1	.28	11 28 16.3	19.09
718	47 Ursæ Maj. .	...	...	...	10 51 30	...	2	.30	48 48 44.5	19.16
719	α Crateris .....	...	3	.27	10 52 51.68	2.948	...	...	107 33	...
720	B.A.C. 3764 ...	7.5	1	.22	10 52 52.95	4.643	2	.29	13 47 45.3	19.20
721	ε Leonis .....	5.6	2	.23	10 53 23.14	3.116	2	.24	83 8 9.6	19.21
722	Radcliffe 2594 .	7.3	...	...	10 53 48	...	1	.30	1 35 27.8	19.23
723	Lalande 21185 .	7.5	5	.27	10 55 54.04	3.348	2	.27	53 4 47.5	19.28
724	Radcliffe 2612 .	7.3	...	...	10 56 35	...	2	.30	3 35 29.9	19.29
725	χ Leonis .....	5.0	2	.25	10 57 41.48	3.099	1	.23	81 53 51.6	19.40
726	ρ <sup>3</sup> Leonis .....	5.0	...	...	10 59 40	...	1	.27	87 16 26.7	19.36
727	β Crateris .....	4.0	4	.26	11 4 40.79	2.940	1	.30	112 3 6.1	19.48
728	ρ <sup>5</sup> Leonis .....	...	...	...	11 6 30	...	1	.30	89 17 51.7	19.51
729	δ Leonis .....	...	...	...	11 6 33	...	3	.29	68 41 54.6	19.66
730	η Leonis .....	5.7	...	...	11 8 26	...	2	.30	75 55 5.7	19.55
731	75 Leonis .....	5.3	2	.28	11 9 58.95	3.085	2	.28	87 12 32.5	19.58
732	ξ <sup>1</sup> Ursæ Maj. .	...	2	.30	11 10 35.87	3.251	...	...	57 40	...
733	ξ <sup>2</sup> Ursæ Maj. .	...	2	.27	11 10 36.16	+3.251	...	...	57 40	...
734	B.A.C. 3855 ...	7.5	...	...	11 11 1	...	2	.30	94 17 11.4	19.60
735	δ Crateris .....	...	...	...	11 12 15	...	1	.30	104 0 38.3	+19.44

711, 722, 724. Identical with R.H.C. 1605, 1639, and 1645, respectively.

730. This star is incorrectly called λ Leonis in the Ledger Results.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
736	B.A.C. 3861 ...	7.3?	2	.28	11 13 39.88	+3.098	1	.32	84 20 27.3	+19.65
737	B.A.C. 3863 ...	...	1	.30	11 14 8.90	3.105	...	...	82 35	...
738	ε Leonis .....	4.7	2	.30	11 16 31.26	3.121	1	.28	78 41 18.9	19.70
739	ε Crateris .....	...	1	.28	11 17 26.40	3.027	1	.30	100 4 52.7	19.71
740	80 Leonis .....	7.0	2	.29	11 18 32.17	3.091	1	.24	85 21 31.1	19.73
741	83 Leonis (1st)	7.5	1	.30	11 19 34.17	3.087	...	...	86 13	...
742	83 Leonis (2d).	7.7	...	...	11 19 35	...	1	.30	86 13 13.8	19.75
743	Radcliffe 2684 .	...	...	...	11 20 20	...	1	.30	4 30 41.4	19.76
744	τ Leonis .....	4.9	4	.26	11 20 38.19	3.086	2	.31	86 21 43.8	19.76
745	58 Ursæ Maj. .	6.5	1	.30	11 22 49.38	3.278	2	.27	46 2 51.1	19.80
746	88 Leonis .....	6.7	1	.24	11 24 25.32	3.126	...	...	74 51	...
747	B.A.C. 3920 ...	...	...	...	11 24 43	...	1	.30	95 41 4.6	19.82
748	89 Leonis .....	5.6	2	.31	11 27 5.96	3.084	3	.30	86 9 5.8	19.85
749	2 Draconis ...	5.3	2	.27	11 27 40.75	3.590	...	...	19 53	...
750	v Leonis .....	...	2	.29	11 29 40.78	3.069	2	.29	90 2 24.1	19.85
751	59 Ursæ Maj. .	6.0	1	.30	11 30 45.73	3.237	1	.29	45 35 16.1	19.89
752	ε Crateris .....	5.5	...	...	11 31 27	...	1	.30	102 25 14.4	19.90
753	61 Ursæ Maj. .	...	...	...	11 33 34	...	1	.25	54 59 44.6	19.92
754	62 Ursæ Maj. .	...	2	.28	11 34 10.40	3.166	...	...	57 28	...
755	B.A.C. 3969 ...	...	1	.31	11 34 39.10	2.979	...	...	121 43	...
756	B.A.C. 3971 ...	7.7?	2	.30	11 34 51.50	3.085	1	.30	84 28 2.3	19.93
757	Radcliffe 2738 .	8.1	4	.72	11 36 41.25	5.178	2	.27	3 40 47.2	19.95
758	B.A.C. 3992 ...	6.3	...	...	11 41 20	...	2	.32	74 55 39.0	19.99
759	β Leonis .....	...	4	.29	11 41 48.89	3.066	3	.30	74 38 3.5	20.10
760	β Virginis .....	...	...	...	11 43 18	...	1	.29	87 26 7.8	20.00
761	B.A.C. 4009 ...	5.3	2	.29	11 44 31.37	3.018	1	.35	120 2 0.8	20.01
762	Groom. 1830 ...	6.5	5	.28	11 44 47.07	3.141	...	...	51 16	...
763	B.A.C. 4020 ...	...	...	...	11 46 37	...	2	.32	92 59 8.4	20.02
764	B.A.C. 4021 ...	8.0?	2	.30	11 46 47.45	3.079	...	...	84 20	...
765	* .....	9.7	3	.28	11 47 2.28	3.132	...	...	51 9	...
766	B.A.C. 4024 ...	6.3	1	.34	11 47 29.56	3.037	...	...	114 56	...
767	B.A.C. 4037 ...	...	2	.32	11 49 51.67	3.032	...	...	122 32	...
768	Radcliffe 2774 .	10.3	...	...	11 51 30	...	2	.30	2 12 48.9	20.04
769	Radcliffe 2775 .	8.5?	...	...	11 51 51	...	3	.31	2 12 54.1	20.04
770	δ Virginis .....	5.7	2	.29	11 52 40.50	+3.074	1	.30	85 33 13.8	+20.05

743, 757, 768, 769. Identical with R.H.C. 1700, 1749, 1777, and 1778, respectively.

232 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
771	B.A.C. 4055 ...	7.7?	4	.31	11 53 54.18	+3.074	...	...	85 35	...
772	67 Ursæ Maj. ...	5.5	1	.28	11 54 53.44	3.100	...	...	46 10	...
773	Radcliffe 2787 ...	8.5	2	.32	11 55 3.62	3.098	2	.29	46 4 7.1	+20.05
774	B.A.C. 4059 ...	6.5	2	.29	11 55 16.27	3.097	1	.28	46 6 17.6	20.05
775	B.A.C. 4064 ...	7.0	2	.26	11 56 29.62	3.073	...	...	83 39	...
776	Groom. 1850 ...	6.6	1	.34	11 57 31.29	3.289	1	.35	3 37 34.6	20.05
777	ε Virginis ...	...	...	...	11 58 0	...	1	.34	80 28 43.4	20.05
778	α Corvi ...	5.0	3	.29	12 1 5.94	3.073	1	.35	113 56 11.7	20.06
779	10 Virginis ...	...	1	.31	12 2 24.90	3.070	2	.32	87 18 16.0	20.06
780	ε Corvi ...	...	4	.32	12 2 49.79	3.074	...	...	111 50	...
781	Oeltz. Arg. 12417	8.3	1	.35	12 3 35.74	3.015	...	...	20 30	...
782	B.A.C. 4111 ...	7.0	3	.29	12 5 4.87	2.929	1	.24	11 46 10.8	20.05
783	B.A.C. 4112 ...	5.5	1	.34	12 5 29.51	2.914	2	.30	11 35 41.2	20.05
784	Radcliffe 2815 ...	7.7	...	...	12 6 45	...	2	.30	2 16 37.5	20.05
785	Groom. 1860 ...	7.8	...	...	12 6 57	...	3	.35	5 42 28.1	20.05
786	B.A.C. 4119 ...	7.3	2	.35	12 6 59.12	3.074	...	...	94 56	...
787	δ Ursæ Maj. ...	...	1	.34	12 8 22.79	2.993	2	.28	32 10 40.9	20.04
788	B.A.C. 4130 (1st)	7.6	3	.27	12 9 55.93	2.707	1	.34	9 5 19.8	20.04
789	B.A.C. 4130 (2d)	7.5	3	.32	12 9 59.57	2.707	1	.34	9 5 7.5	20.04
790	9 Comæ ...	6.5	...	...	12 12 23	...	2	.32	61 2 57.9	20.03
791	B.A.C. 4143 ...	5.9	4	.35	12 12 25.38	2.780	...	...	14 3	...
792	η Virginis ...	...	2	.32	12 12 38.53	3.065	1	.31	89 52 39.1	20.06
793	Groom. 1871 ...	6.7	1	.28	12 12 41.02	1.543	1	.35	2 46 28.9	20.02
794	70 Ursæ Majoris	...	1	.29	12 13 57.11	+2.937	...	...	31 21	...
795	Groom. 1884 ...	6.3	1	.83	12 14 22.33	-0.036	1	.89	1 30 50.0	20.02
796	Groom. 1879 ...	...	...	...	12 15 0	...	1	.35	5 50 17.2	20.01
797	17 Virginis ...	6.9	3	.30	12 15 18.94	+3.061	...	...	83 54	...
798	W.B. xii. 276 ...	6.0	...	...	12 17 53	...	2	.30	100 49 21.7	19.99
799	Groom. 1889 ...	8.7	2	.34	12 18 6.88	1.983	...	...	5 34	...
800	B.A.C. 4184 ...	...	...	...	12 18 7	...	3	.29	65 17 5.7	19.99
801	Groom. 1892 ...	8.1	2	.35	12 19 23.76	1.986	2	.35	5 47 4.8	19.98
802	72 Ursæ Majoris	7.2	2	.26	12 19 44.08	2.901	2	.34	34 3 16.2	19.98
803	B.A.C. 4199 ...	7.0	3	.30	12 20 32.06	3.011	...	...	63 18	...
804	20 Comæ ...	6.0	2	.31	12 22 35.10	3.018	2	.32	68 19 1.2	19.96
805	B.A.C. 4213 ...	7.0	1	.34	12 22 46.13	+3.101	1	.35	102 36 24.7	+19.96

784. Identical with R.H.C. 1816.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pro- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pro- cession in N.P.D.
					h. m. s.	s.			° ' "	"
806	B.A.C. 4214 ...	6.0	1	.35	12 22 51.96	+3.127	1	.34	112 51 33.2	+19.96
807	γ Can. Venat. ...	6.3	3	.29	12 23 19.19	2.894	...	...	37 41	...
808	4 Draconis .....	5.3	2	.33	12 23 52.03	2.689	...	...	20 1	...
809	Oeltz. Arg. 12731	7.5	2	.32	12 25 39.00	2.675	...	...	20 40	...
810	q Virginis .....	5.7	2	.27	12 26 27.36	3.094	...	...	98 40	...
811	β Corvi .....	...	1	.29	12 26 56.18	3.130	1	.35	112 36 40.1	19.99
812	B.A.C. 4238 ...	7.3	1	.30	12 27 17.65	3.047	...	...	81 29	...
813	κ Draconis .....	4.0	2	.32	12 27 24.10	2.618	2	.34	19 25 43.0	19.91
814	23 Comæ.....	4.5	1	.35	12 27 46.38	3.001	...	...	66 35	...
815	24 Comæ (1st) .	7.2	2	.35	12 27 58.99	3.014	...	...	70 50	...
816	24 Comæ (2d)...	5.5	2	.35	12 28 0.48	3.014	1	.30	70 50 27.6	19.91
817	6 Draconis .....	5.3	2	.33	12 28 42.26	2.590	1	.30	19 11 43.2	19.90
818	B.A.C. 4250 ...	7.2	2	.32	12 29 56.35	3.042	...	...	80 25	...
819	χ Virginis .....	4.9	4	.29	12 31 55.33	3.094	4	.31	97 12 49.7	19.86
820	B.A.C. 4159 ...	9.2	3	.33	12 32 2.99	3.094	...	...	97 15	...
821	* .....	10.1	1	.34	12 32 29.48	2.571	2	.30	20 41 9.9	19.86
822	γ Virginis (N.)...	4.0	...	...	12 34 28	...	2	.34	90 40 12.2	19.88
823	γ Virginis (S.)...	...	2	.32	12 34 28.16	3.037	...	...	90 40	...
824	Oeltz. Arg. 12906	9.3	2	.35	12 35 10.39	2.534	...	...	20 50	...
825	Groom. 1923 ...	7.6	3	.30	12 37 15.98	0.854	2	.34	5 34 36.2	19.79
826	γ Draconis .....	5.8	3	.30	12 41 45.23	2.484	1	.30	22 26 0.3	19.72
827	B.A.C. 4306 ...	7.5	4	.35	12 42 46.36	3.100	2	.27	96 51 30.2	19.71
828	* .....	10.6	...	...	12 43 0	...	2	.33	20 52 22.2	19.70
829	32 Comæ.....	6.6	3	.34	12 45 8.55	2.986	2	.33	72 9 10.3	19.67
830	33 Comæ.....	7.1	4	.31	12 45 18.93	2.985	1	.34	72 7 2.8	19.67
831	38 Virginis .....	6.0	1	.33	12 45 55.18	3.083	1	.38	92 46 50.3	19.65
832	ψ Virginis .....	5.3	2	.32	12 46 58.36	3.113	...	...	98 46	...
833	ε Ursæ Majoris .	...	2	.34	12 47 46.45	2.649	2	.32	33 16 6.4	19.62
834	Groom. 1937 ...	6.0	2	.85	12 48 0.06	0.340	...	...	5 49	...
835	Groom. 1940 ...	5.9	2	.85	12 48 8.92	0.335	...	...	5 50	...
836	δ Virginis .....	...	4	.34	12 48 27.09	3.050	1	.30	85 49 50.8	19.61
837	* .....	9.5	...	...	12 49 0	...	2	.35	20 57 27.2	19.60
838	12 Can. Ven. (1st)	6.6	2	.35	12 49 21.63	2.839	1	.30	50 55 5.3	19.59
839	12 Can. Ven. (2d)	...	2	.33	12 49 22.96	2.818	1	.38	50 54 51.2	+19.54
840	8 Draconis .....	...	1	.33	12 49 48.44	+2.417	...	...	23 47	...

234 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
841	B.A.C. 4348 (1st)	8.0	1	.38	12 50 3.46	+2.659	...	...	35 8	...
842	Groom. 1947 ...	8.0	3	.33	12 53 42.52	2.238	3	.35	20 27 28.3	+19.51
843	9 Draconis .....	5.7	2	.33	12 54 32.74	2.314	...	...	22 38	...
844	78 Ursæ Majoris	5.5	2	.37	12 54 37.64	2.582	1	.33	32 52 2.6	19.49
845	ε Virginis .....	...	3	.33	12 55 6.57	3.005	3	.35	78 16 35.6	19.49
846	γ Virginis .....	...	1	.33	13 0 27.79	3.132	...	...	99 59	...
847	B.A.C. 4392 ...	6.4	4	.33	13 0 45.92	+2.389	2	.34	27 11 47.0	19.35
848	B.A.C. 4393 ...	6.5	...	...	13 1 5	...	1	.36	61 40 54.1	19.35
849	Radcliffe 2967 ...	8.0	1	.33	13 1 37.13	-2.986	2	.35	3 21 4.8	19.33
850	θ Virginis .....	5.0	4	.35	13 2 36.13	+3.098	...	...	94 47	...
851	α Comæ .....	5.0	2	.35	13 3 4.78	2.951	1	.38	71 43 6.8	19.30
852	Oeltz. Arg. 13381	10.0	1	.24	13 4 4.26	2.116	...	...	21 7	...
853	53 Virginis .....	...	1	.35	13 4 30.57	3.173	...	...	105 26	...
854	18 Can. Venat. .	...	1	.37	13 5 1.56	2.739	2	.28	48 27 5.3	19.25
855	β Comæ .....	4.7	1	.38	13 5 14.63	2.866	...	...	61 24	...
856	54 Virginis (1st)	7.0	1	.36	13 5 51.95	3.194	2	.37	108 4 15.4	19.23
857	54 Virginis (2d).	7.9	3	.35	13 5 52.18	3.194	...	...	108 4	...
858	55 Virginis .....	5.8	2	.34	13 6 35.54	3.204	...	...	109 11	...
859	Groom. 1971 ...	7.1	2	.30	13 8 8.20	2.098	3	.34	21 56 15.3	19.17
860	57 Virginis .....	...	2	.37	13 8 18.68	3.207	...	...	109 11	...
861	ε Virginis .....	6.0	2	.33	13 9 43.71	2.999	1	.35	79 49 58.5	19.13
862	61 Virginis .....	...	1	.33	13 10 59.12	3.199	...	...	107 31	...
863	20 Can. Venat. .	...	...	...	13 11 10	...	1	.34	48 40 42.7	19.10
864	Groom. 2006 ...	7.4	...	...	13 11 40	...	2	.37	1 35 25.2	19.09
865	B.A.C. 4462 ...	7.4	3	.31	13 13 23.62	3.029	2	.35	84 25 35.1	19.04
866	Oeltz. Arg. 13530	7.3	4	.36	13 13 29.41	2.001	...	...	21 30	...
867	B.A.C. 4473 ...	7.2	3	.34	13 15 8.84	3.112	...	...	95 27	...
868	66 Virginis .....	6.3	2	.34	13 17 9.95	3.105	2	.37	94 25 15.0	18.93
869	Spica .....	...	1	.24	13 17 43.23	3.149	3	.31	100 25 9.5	18.95
870	ζ <sup>1</sup> Ursæ Majoris	...	3	.37	13 18 11.96	2.415	...	...	34 20	...
871	ζ <sup>2</sup> Ursæ Majoris	5.0	3	.36	13 18 12.98	2.415	1	.35	34 20 8.2	18.90
872	γ Ursæ Majoris .	...	1	.39	13 19 31.72	+2.403	...	...	34 16	...
873	Groom. 2007 ...	7.5	2	.88	13 20 32.23	-2.758	...	...	4 30	...
874	B.A.C. 4496 ...	7.7	1	.35	13 20 59.81	+3.071	1	.34	90 5 13.5	+18.82
875	B.A.C. 4497 ...	6.5	1	.34	13 21 8.29	+2.121	...	...	26 1	...

849. Identical with R.H.C. 1944.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
876	70 Virginis .....	6.0	1	.33	13 21 29.05	+2.950	...	...	75 28	...
877	B.A.C. 4500 ...	6.6	...	...	13 21 48	...	2	.33	107 59 32.8	+18.79
878	(R) Hydræ .....	6.2	1	.35	13 21 57.75	3.265	1	.35	112 29 42.2	18.79
879	B.A.C. 4502 ...	6.5	1	.34	13 21 57.88	3.075	1	.38	90 37 33.7	18.79
880	1 <sup>1</sup> Virginis .....	6.3	1	.24	13 23 1.53	3.119	...	...	95 44	...
881	W.B. xiii. 375. .	8.3	1	.33	13 23 28.68	3.131	1	.33	97 7 44.2	18.74
882	B.A.C. 4515 ...	7.4	1	.39	13 24 29.11	3.084	1	.38	91 35 44.2	18.71
883	λ Virginis .....	...	1	.24	13 25 29.89	3.152	1	.24	99 25 57.1	18.68
884	B.A.C. 4527 ...	5.7	1	.36	13 25 47.14	0.464	2	.37	10 37 20.7	18.67
885	W.B. xiii. 438 .	7.5	1	.33	13 26 51.65	3.140	...	...	97 53	...
886	ζ Virginis .....	...	2	.34	13 27 27.58	3.052	...	...	89 52	...
887	24 Can. Venat. .	5.0	1	.39	13 28 38.68	2.475	2	.34	40 15 25.4	18.57
888	* .....	8.0	...	...	13 28 41	...	1	.39	9 10 28.1	18.57
889	B.A.C. 4555 ...	7.0	3	.36	13 31 37.83	2.372	2	.34	36 40 55.3	18.47
890	82 Ursæ Majoris	6.1	5	.35	13 34 0.53	+2.347	1	.38	36 21 34.9	18.39
891	Radcliffe 3075 ...	8.0	2	.34	13 35 30.35	-4.688	...	...	4 0	...
892	o Virginis .....	6.0	...	...	13 35 56	...	2	.35	85 44 31.2	18.33
893	B.A.C. 4577 ...	6.2	2	.37	13 37 4.86	+1.862	2	.38	24 27 35.2	18.28
894	85 Virginis .....	6.7	2	.33	13 37 56.81	3.220	...	...	105 3	...
895	Rümker 4459 ...	6.6	3	.35	13 39 55.36	3.001	4	.35	82 56 2.3	18.18
896	84 Ursæ Majoris	6.0	1	.35	13 41 17.53	2.250	2	.35	34 51 23.2	18.13
897	77 Ursæ Majoris .	...	5	.35	13 41 56.53	2.374	...	...	39 59	...
898	89 Virginis .....	5.7	1	.39	13 42 9.84	3.251	...	...	107 25	...
899	Oeltz. Arg. 14009	9.3	...	...	13 42 10	...	1	.38	10 24 54.0	18.09
900	B.A.C. 4628 ...	6.0	1	.34	13 44 53.29	2.651	...	...	54 38	...
901	B.A.C. 4634 ...	7.0	1	.34	13 45 43.24	2.884	...	...	72 34	...
902	* .....	8.1	1	.36	13 46 29.20	1.681	2	.37	23 18 58.7	17.93
903	B.A.C. 4643 ...	...	...	...	13 46 34	...	1	.34	6 32 8.3	17.92
904	η Boötis .....	...	2	.37	13 47 55.54	2.858	...	...	70 53	...
905	86 Ursæ Majoris	5.5	...	...	13 48 37	...	1	.35	35 34 19.9	17.85
906	Lalande 25653 .	6.6	3	.36	13 49 52.43	2.675	1	.39	57 16 21.5	17.79
907	B.A.C. 4658 ...	7.5	1	.36	13 50 50.49	3.196	...	...	101 22	...
908	48 Hydræ .....	...	1	.38	13 52 3.64	3.355	...	...	114 19	...
909	τ Virginis .....	...	2	.34	13 54 25.46	3.047	2	.35	87 46 0.3	+17.68
910	B.A.C. 4682 ...	7.5	2	.37	13 57 30.23	+3.254	...	...	105 39	...
891. Identical with R.H.C. 2045.										

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
911	Piazzi xiii. 291	8.5	1	.36	13 57 40.91	+ 3.168	3	.37	98 21 57.8	+17.47
912	Oeltz. Arg. 14219	7.7	...	...	13 58 12	...	1	.38	18 20 14.2	17.45
913	$\pi$ Hydre .....	...	3	.39	13 58 17.72	3.393	...	...	116 0	...
914	B.A.C. 4689	...	...	...	13 58 43	...	1	.35	20 38 14.7	17.42
915	Oeltz. Arg. 14246	...	1	.38	13 59 16.75	1.138	...	...	18 59	...
916	W.B. xiii. 1058	9.3	1	.35	14 0 18.13	3.195	...	...	100 29	...
917	B.A.C. 4700	...	2	.41	14 3 5.60	3.262	1	.39	105 37 49.3	17.23
918	B.A.C. 4707	8.0?	1	.36	14 4 26.33	+ 3.137	...	...	95 28	...
919	Groom. 2099	7.4	4	.63	14 4 44.21	- 8.018	...	...	3 34	...
920	97 Virginis .....	7.3	1	.36	14 4 59.72	+ 3.184	...	...	99 14	...
921	B.A.C. 4711	6.7	1	.35	14 5 6.85	3.409	...	...	115 57	...
922	B.A.C. 4717	...	...	...	14 5 25	...	1	.36	92 38 17.5	17.13
923	B.A.C. 4722	...	1	.39	14 7 35.04	3.294	...	...	107 32	...
924	B.A.C. 4723	7.3	...	...	14 7 37	...	1	.38	60 13 45.2	17.02
925	$\kappa^1$ Boötis .....	7.0	1	.35	14 8 22.47	2.146	1	.36	37 32 48.0	16.99
926	$\kappa^2$ Boötis .....	4.7	1	.36	14 8 23.71	2.146	1	.38	37 32 41.3	16.99
927	Arcturus .....	...	1	.37	14 9 11.16	2.734	...	...	70 5	...
928	B.A.C. 4732	...	1	.44	14 9 26.36	+ 1.093	...	...	19 54	...
929	4 Ursæ Minoris .	...	1	.44	14 9 27.82	- 0.359	...	...	11 47	...
930	18 Boötis .....	6.0	1	.36	14 12 24.11	+ 2.893	1	.39	76 20 20.7	16.80
931	2 Libræ .....	6.7	2	.36	14 15 47.51	3.217	...	...	101 4	...
932	B.A.C. 4769	...	...	...	14 16 57	...	1	.36	83 31 52.1	16.58
933	B.A.C. 4773	7.0	1	.41	14 17 7.71	2.985	...	...	83 32	...
934	B.A.C. 4781	...	...	...	14 18 27	...	1	.38	116 12 49.0	16.51
935	$\theta$ Boötis .....	...	2	.40	14 20 21.61	+ 2.069	2	.40	37 29 29.7	16.41
936	R.H.C. 2165	8.3	1	.44	14 25 8.05	- 5.289	...	...	5 24	...
937	$\rho$ Boötis .....	...	2	.38	14 25 42.52	+ 2.587	1	.44	59 0 12.0	16.00
938	$\gamma$ Boötis .....	...	...	...	14 26 22	...	1	.38	51 4 9.5	16.10
939	B.A.C. 4826	7.5	2	.39	14 28 51.03	1.977	...	...	36 29	...
940	B.A.C. 4828	6.7	1	.43	14 29 26.86	+ 3.239	...	...	101 42	...
941	Radcliffe 3250	9.0	1	.38	14 31 30.30	- 2.089	3	.40	1 56 26.7	15.83
942	33 Boötis .....	...	...	...	14 33 33	...	1	.41	44 58 50.3	15.72
943	B.A.C. 4845	...	...	...	14 33 45	...	1	.42	35 21 43.2	15.70
944	$\pi^1$ Boötis .....	6.0	1	...	14 34 3	...	1	.44	72 58 14.6	+15.69
945	$\pi^2$ Boötis .....	6.4	3	.40	14 34 3.70	+ 2.816	...	...	72 58	...
941. Identical with R.H.C. 3184.										

No.	Name of Star.	Mag.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Precession in R. A.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean N. P. D. 1858, Jan. 1.	Precession in N. P. D.
					h. m. s.	s.			° ' "	"
946	B.A.C. 4848 ...	7.3	1	.43	14 34 20.47	+3.242	...	...	101 38	...
947	$\mu$ Virginis .....	...	1	.44	14 35 35.05	3.145	...	...	95 2	...
948	54 Hydræ (1st) ...	6.0	1	.44	14 37 47.68	3.464	...	...	114 50	...
949	54 Hydræ (2d) ...	8.0	1	.44	14 37 48.18	3.464	...	...	114 50	...
950	$\epsilon$ Boötis .....	...	1	.42	14 38 47.20	+2.619	...	...	62 20	...
951	B.A.C. 4881 ...	...	...	...	14 39 18	...	1	.41	44 12 44.4	+15.40
952	R.H.C. 2207 ...	9.5	1	.43	14 39 51.59	-5.238	...	...	5 54	...
953	R.H.C. 2206 ...	9.2	1	.43	14 39 52.84	-5.206	1	.38	5 55 25.6	15.37
954	58 Hydræ .....	...	1	.44	14 41 57.74	+3.520	...	...	117 22	...
955	8 Libræ .....	6.0	...	...	14 42 50	...	1	.43	105 24 16.6	15.21
956	$\alpha$ Libræ .....	...	2	.39	14 43 1.79	3.304	...	...	105 27	...
957	11 Libræ .....	...	...	...	14 43 39	...	1	.44	91 42 18.0	15.16
958	$\xi^1$ Boötis .....	...	1	.44	14 44 50.13	2.755	...	...	70 18	...
959	$\xi^2$ Boötis .....	...	1	.44	14 44 50.58	2.755	...	...	70 18	...
960	6 Ursæ Minoris	7.5	1	.43	14 45 8.22	0.263	3	.41	17 26 31.0	15.07
961	* .....	7.7	1	.44	14 45 10.06	3.255	1	.45	101 47 53.1	15.06
962	B.A.C. 4920 ...	7.0?	...	...	14 48 39	...	1	.44	115 42 28.9	14.87
963	$\xi^2$ Libræ .....	...	1	.39	14 49 4.30	3.243	...	...	100 50	...
964	B.A.C. 4923 (1) ...	9.0	2	.42	14 49 10.11	3.411	...	...	110 46	...
965	B.A.C. 4923 (2) ...	6.0	2	.43	14 49 11.15	3.411	1	.41	110 46 20.8	14.83
966	16 Libræ .....	...	1	.44	14 49 46.48	+3.130	1	.39	93 45 57.9	14.80
967	$\beta$ Ursæ Min. ...	...	1	.39	14 51 9.49	-0.261	...	...	15 16	...
968	18 Libræ .....	5.5	...	...	14 51 13	...	2	.43	100 34 15.2	14.71
969	B.A.C. 4937 ...	...	...	...	14 51 41	...	1	.45	39 47 22.4	14.68
970	* .....	7.7	2	.44	14 55 11.15	+3.231	1	.44	99 49 48.7	14.47
971	20 Libræ .....	...	1	.39	14 55 46.12	3.498	1	.39	114 43 14.8	14.44
972	$\beta$ Boötis .....	...	2	.42	14 56 35.79	2.263	...	...	49 3	...
973	B.A.C. 4962 ...	7.0	1	.43	14 57 42.74	2.581	1	.41	62 21 41.6	14.32
974	Groom. 2210 ...	7.3	...	...	14 57 53	...	1	.44	3 28 2.2	14.31
975	$\psi$ Boötis .....	...	2	.44	14 58 21.69	2.570	1	.44	62 29 48.2	14.28
976	$\iota^1$ Boötis .....	...	...	...	14 59 7	...	1	.45	41 47 32.5	14.23
977	9 Ursæ Minoris	6.6	2	.41	15 0 17.97	0.100	1	.43	17 40 49.3	14.16
978	$\kappa$ Boötis .....	5.7	1	.39	15 0 43.69	1.991	1	.40	41 17 56.4	14.13
979	$\epsilon$ Boötis .....	5.4	2	.44	15 1 3.90	2.619	...	...	64 34	...
980	$\iota^1$ Libræ .....	5.5	5	.42	15 4 8.15	+3.406	1	.39	109 15 3.9	+13.92



No.	Name of Star.	Mag.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Precession in R.A.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ' "	"
981	23 Libræ .....	7.2	2	.40	15 5 11.38	+3.517	3	.44	114 46 15.3	+13.86
982	ε <sup>3</sup> Libræ .....	6.7	4	.42	15 5 14.43	+3.405	1	.41	109 6 37.7	13.85
983	Groom. 2213 ...	6.7	3	.43	15 6 25.88	-7.013	2	.71	5 30 2.6	13.78
984	β Libræ .....	...	...	...	15 9 22	...	1	.45	98 51 23.2	13.60
985	δ Boötis .....	...	3	.41	15 9 46.65	+2.410	1	.40	56 9 11.9	13.56
986	5 Serpentis ...	5.7	2	.46	15 12 4.06	+3.030	...	...	87 42	...
987	Radcliffe 3354 .	8.2	5	.44	15 12 13.04	-7.392	4	.43	5 25 27.3	13.40
988	R.H.C. 2288 ...	9.3	3	.44	15 13 15.58	-7.268	1	.44	5 30 58.6	13.34
989	Radcliffe 3362 .	...	1	.42	15 14 2.09	-11.428	...	...	3 57	...
990	B.A.C. 5064 ...	7.9	2	.41	15 15 2.53	+1.841	1	.43	39 16 13.0	13.22
991	B.A.C. 5066 ...	8.0?	1	.41	15 15 32.07	+3.580	...	...	116 48	...
992	11 Ursæ Min. .	5.2	1	.45	15 17 14.16	-0.113	1	.44	17 39 41.0	13.07
993	η Coronæ .....	...	...	...	15 17 20	...	1	.47	59 11 49.7	13.07
994	μ Boötis .....	5.0	3	.43	15 19 7.55	+2.277	3	.44	52 7 22.0	12.95
995	ζ <sup>1</sup> Libræ .....	...	1	.42	15 20 15.28	+3.369	...	...	106 13	...
996	γ Ursæ Min. ...	...	1	.44	15 20 58.76	-0.158	...	...	17 40	...
997	ι Draconis .....	...	2	.41	15 21 46.56	+1.323	1	.45	30 32 7.2	12.77
998	Groom. 2283 ...	7.4	7	.62	15 24 49.54	-23.690	3	.43	2 13 47.8	12.56
999	B.A.C. 5116 ...	...	...	...	15 25 6	...	1	.45	27 13 57.9	12.55
1000	B.A.C. 5117 ...	...	...	...	15 25 30	...	2	.41	114 37 38.9	12.52
1001	γ Libræ .....	...	...	...	15 27 35	...	1	.44	104 18 49.3	12.38
1002	Oelt. Arg. 15453	8.6	2	.43	15 27 39.03	+0.988	...	...	26 48	...
1003	δ Serpentis (N.)	...	2	.45	15 28 1.28	2.865	...	...	78 59	...
1004	δ Serpentis (S.)	...	2	.44	15 28 1.28	+2.865	1	.43	78 59 7.5	12.34
1005	R.H.C. 2333 ...	9.1	2	.44	15 29 14.68	-38.664	2	.45	1 27 7.7	12.26
1006	τ <sup>5</sup> Serpentis ...	6.0	1	.47	15 29 56.70	+2.754	...	...	73 24	...
1007	41 Libræ .....	...	1	.42	15 30 44.58	3.433	...	...	108 50	...
1008	B.A.C. 5163 ...	...	2	.45	15 31 0.58	3.618	1	.47	117 10 35.7	12.14
1009	42 Libræ .....	6.0	2	.41	15 31 53.69	3.531	...	...	113 21	...
1010	B.A.C. 5167 ...	7.0?	1	.44	15 32 51.20	3.661	3	.43	118 50 19.0	12.01
1011	κ Libræ .....	...	3	.47	15 33 46.44	3.445	...	...	109 13	...
1012	ζ <sup>1</sup> Coronæ .....	6.5	4	.44	15 34 1.40	2.258	2	.45	52 54 0.6	11.93
1013	ζ <sup>2</sup> Coronæ .....	5.3	3	.44	15 34 1.88	+2.258	1	.47	52 54 4.1	11.93
1014	R.H.C. 2342 ...	7.8	2	.45	15 34 42.55	-7.821	1	.45	5 38 53.8	+11.88
1015	B.A.C. 5188 ...	6.7	2	.43	15 35 27.56	+3.352	...	...	104 35	...

987, 989. Identical with R.H.C. 2283 and 2290, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1016	$\psi$ Serpentis ...	6.1	2	.44	15 36 53.60	+3.014	1	.46	87 1 35.6	+11.72
1017	$\alpha$ Serpentis ...	...	4	.44	15 37 16.54	2.948	...	...	83 7	...
1018	B.A.C. 5215 ...	...	...	...	15 39 41	...	2	.45	118 20 49.1	11.53
1019	$\delta$ Scorpii .....	...	1	.41	15 42 26.89	3.592	2	.45	115 18 57.0	11.33
1020	(R) Coronæ ...	6.6	5	.46	15 42 43.45	2.469	...	...	61 24	...
1021	$\epsilon$ Serpentis ...	...	2	.44	15 43 44.31	2.975	...	...	85 6	...
1022	B.A.C. 5249 ...	...	...	...	15 44 31	...	1	.44	26 57 41.1	11.18
1023	$\Lambda$ Scorpii .....	5.1	1	.44	15 45 5.78	3.587	1	.45	114 53 57.7	11.14
1024	$\theta$ Libræ .....	...	2	.45	15 45 44.80	3.397	...	...	106 19	...
1025	$\kappa$ Coronæ .....	...	1	.44	15 45 52.95	2.258	...	...	53 54	...
1026	3 Scorpii .....	6.5?	...	...	15 46 9	...	1	.44	114 49 10.3	11.06
1027	39 Serpentis ...	...	...	...	15 46 36	...	1	.47	76 21 24.7	11.02
1028	$\chi$ Herculis .....	5.3	3	.44	15 47 45.94	2.031	...	...	47 9	...
1029	$\rho$ Scorpii .....	...	1	.47	15 48 7.66	+3.687	2	.47	118 47 44.7	10.91
1030	Radcliffe 3475 .	7.1	1	.43	15 49 42.88	-10.601	2	.44	4 42 52.6	10.80
1031	$\gamma$ Serpentis ...	...	2	.46	15 49 53.88	+2.744	...	...	73 52	...
1032	2 Herculis .....	6.3	...	...	15 49 54	...	2	.45	46 26 44.8	10.78
1033	$\pi$ Scorpii .....	...	...	...	15 50 16	...	1	.44	115 42 7.3	10.75
1034	$\delta$ Scorpii .....	...	2	.47	15 51 56.61	3.533	2	.47	112 12 51.4	10.64
1035	49 Libræ .....	5.5	...	...	15 52 22	...	1	.48	106 6 43.0	10.60
1036	$r$ Herculis .....	...	2	.46	15 54 51.63	2.695	...	...	71 47	...
1037	$\rho$ Coronæ .....	...	...	...	15 55 37	...	2	.44	56 15 56.7	10.36
1038	B.A.C. 5318 ...	7.0?	4	.46	15 55 44.32	3.693	1	.45	118 32 11.0	10.35
1039	51 Libræ (1 & 2)	4.7	1	.47	15 56 33.84	3.294	...	...	100 59	...
1040	51 Libræ (3rd)	8.0	1	.47	15 56 34.44	3.294	...	...	100 59	...
1041	$\beta^1$ Scorpii .....	...	2	.42	15 57 11.15	3.476	...	...	109 25	...
1042	$\beta^2$ Scorpii .....	...	1	.46	15 57 11.70	3.476	...	...	109 25	...
1043	$\theta$ Draconis ...	...	1	.48	15 59 13.86	1.152	3	.47	31 3 16.4	10.09
1044	B.A.C. 5346 ...	7.0	3	.47	15 59 24.64	3.668	3	.46	117 20 46.9	10.07
1045	$\epsilon^2$ Scorpii .....	...	2	.43	16 3 34.09	3.680	1	.44	117 33 14.8	9.75
1046	$\phi$ Herculis ...	4.7	...	...	16 4 17	...	3	.43	44 41 27.6	9.70
1047	14 Herculis ...	6.3	3	.45	16 5 48.09	+1.928	1	.48	45 48 0.4	9.59
1048	* .....	10.7	...	...	16 6 30 $\pm$	...	1	.45	106 21 55.2	9.53
1049	Radcliffe 3522 .	7.4	6	.39	16 6 36.21	-8.166	1	.40	5 58 41.3	9.52
1050	49 Serpentis (1)	7.7	2	.46	16 6 41.34	+2.779	1	.49	76 5 25.0	+9.52

1023. Called in sections of N.P.D. 2 Scorpii.

1030, 1049. Identical with B.H.C. 2380 and 2424, respectively.

1036. Called in preceding sections 5 Herculis.

1039. Observed as one mass of light.

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No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.		Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.			Pre- cession in N.P.D.
					h. m. s.	s.				° ' "	"	"	
1051	49 Serpentis (2)	7.7	3	.47	16 6 41.53	+ 2.779	1	.47	.47	76 5 29.2		+9.52	
1052	δ Ophiuchi ...	...	...	...	16 6 54.41	3.135	...	...	...	93 19		...	
1053	18 Scorpii .....	5.5	...	...	16 7 54	...	1	.49	.49	97 59 25.8		9.43	
1054	σ Coronæ .....	6.5	2	.44	16 9 21.77	2.265	1	.44	.44	55 46 46.6		9.31	
1055	B.A.C. 5453 ...	7.7	1	.44	16 13 47.39	+ 0.289	3	.47	.47	23 16 14.6		8.97	
1056	19 Ursæ Min. .	...	2	.43	16 14 55.88	- 1.822	1	.48	.48	13 46 3.8		8.88	
1057	γ Herculis .....	...	2	.48	16 15 39.41	+ 2.646	1	.47	.47	70.30 38.4		8.82	
1058	B.A.C. 5465 ...	7.4	2	.47	16 15 46.80	3.678	2	.45	.45	116 48 58.9		8.81	
1059	ψ Ophiuchi ...	5.5	3	.43	16 15 48.02	+ 3.501	2	.49	.49	109 42 5.4		8.80	
1060	20 Ursæ Min. .	6.4	3	.48	16 16 9.22	- 1.597	...	...	...	14 26		...	
1061	B.A.C. 5487 ...	7.0	3	.46	16 18 37.28	+ 3.739	1	.49	.49	118 57 50.4		8.58	
1062	Antares .....	...	4	.46	16 20 42.54	3.665	2	.47	.47	116 6 45.9		8.45	
1063	η Ursæ Min. ...	5.0	...	...	16 21 43	...	1	.44	.44	13 55 10.8		8.34	
1064	η Draconis ...	...	2	.44	16 22 4.35	+ 0.821	1	.46	.46	28 9 51.0		8.23	
1065	R.H.C. 2463 ...	9.7	2	.48	16 23 19.55	- 16.277	2	.46	.46	3 36 27.1		8.21	
1066	β Herculis ...	...	...	...	16 24 7	...	1	.49	.49	68 11 53.9		8.15	
1067	B.A.C. 5527 ...	5.7	5	.48	16 24 23.72	+ 2.606	...	...	...	69 12		...	
1068	τ Scorpii .....	...	4	.44	16 27 3.05	- 3.721	2	.48	.48	117 55 4.5		7.91	
1069	12 Ophiuchi ...	5.0	...	...	16 28 53	...	2	.44	.44	92 1 6.2		7.77	
1070	B.A.C. 5560 ...	5.7	...	...	16 30 26	...	2	.47	.47	28 52 42.9		7.64	
1071	B.A.C. 5579 ...	...	1	.40	16 33 21.86	+ 3.462	...	...	...	107 28		...	
1072	R.H.C. 2494 ...	8.9	3	.48	16 34 24.88	- 42.983	2	.45	.45	1 32 54.0		7.31	
1073	38 Herculis ...	...	...	...	16 34 30	...	3	.47	.47	84 51 2.1		7.31	
1074	B.A.C. 5595 ...	7.0	3	.48	16 35 5.95	+ 3.693	1	.48	.48	116 32 2.2		7.26	
1075	ζ Herculis .....	...	...	...	16 35 56	...	1	.48	.48	58 8 16.7		6.75	
1076	15 Ophiuchi ...	6.7	2	.45	16 36 36.65	+ 3.599	...	...	...	112 55		...	
1077	B.A.C. 5607 ...	7.5?	...	...	16 36 40	...	1	.49	.49	118 34 28.5		7.13	
1078	B.A.C. 5611 ...	6.6	2	.49	16 36 48.64	- 2.673	...	...	...	12 17		...	
1079	25 Scorpii .....	6.7	1	.45	16 38 10.16	+ 3.662	...	...	...	115 16		...	
1080	R.H.C. 2501 ...	7.3	2	.48	16 39 44.38	- 8.877	3	.47	.47	6 0 1.6		6.88	
1081	ε Scorpii .....	...	1	.49	16 40 58.77	+ 3.920	...	...	...	124 2		...	
1082	Oelt. Arg. 16517	7.3	...	...	16 42 43	...	4	.46	.46	34 25 40.9		6.64	
1083	* .....	7.5?	1	.40	16 45 48.99	+ 3.678	3	.46	.46	115 34 31.1		6.38	
1084	R.H.C. 2517 ...	8.4	1	.49	16 46 57.21	- 17.748	2	.44	.44	3 29 24.5		+6.29	
1085	κ Ophiuchi ...	...	2	.47	16 50 56.88	+ 2.834	...	...	...	80 24		...	

No.	Name of Star.	Mag.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Precession in R. A.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Precession in N.P.D.
					h. m. s.	"			° ' "	"
1086	B.A.C. 5709...	6.0	1	.48	16 51 16.51	+ 3.663	...	...	114 52	...
1087	W.B. xvi. 962.	8.8	1	.49	16 51 18.17	3.366	2	.46	102 58 37.7	+5.92
1088	26 Ophiuchi...	6.0	...	...	16 51 28	...	1	.49	114 46 5.4	5.91
1089	B.A.C. 5720...	...	...	...	16 53 10	...	1	.44	103 20 27.7	5.76
1090	ε Herculis ...	...	2	.46	16 54 51.40	2.295	...	...	58 52	...
1091	λ <sup>1</sup> Draconis...	...	...	...	16 55 15	...	1	.49	24 38 54.4	5.59
1092	28 Ophiuchi...	6.7	...	...	16 55 16	...	1	.50	115 29 26.0	5.59
1093	31 Ophiuchi...	6.5	...	...	16 56 0	...	2	.50	115 26 19.9	5.53
1094	B.A.C. 5752...	6.0	3	.49	16 56 45.24	1.098	...	...	33 6	...
1095	ι Ophiuchi ...	6.2	3	.49	16 57 26.08	2.755	...	...	76 13	...
1096	ε Herculis ...	6.4	2	.47	16 58 24.26	2.147	2	.44	54 22 59.1	5.33
1097	(R) Ophiuchi.	7.0	2	.42	16 59 36.91	3.439	1	.40	105 53 59.3	5.23
1098	ε Ursæ Min. ...	...	...	...	17 0 40	...	1	.44	7 44 9.7	5.14
1099	77 Ophiuchi ...	...	...	...	17 2 14	...	1	.49	105 32 43.4	5.00
1100	B.A.C. 5797...	7.3	1	.45	17 4 53.05	0.956	...	...	31 33	...
1101	63 Herculis...	6.6	3	.49	17 5 10.42	2.481	2	.47	65 35 9.6	4.75
1102	Groom. 2423.	...	...	...	17 6 28	...	2	.47	28 39 46.4	4.65
1103	Α <sup>1</sup> Ophiuchi...	...	1	.40	17 6 37.27	+ 3.716	1	.40	116 23 22.0	4.63
1104	Radcliffe 3685	7.7	1	.49	17 6 45.20	- 11.477	...	...	5 6	...
1105	30 Scorpii ...	6.7	...	...	17 7 30	...	1	.49	116 20 12.9	4.55
1106	B.A.C. 5815...	7.2	1	.45	17 7 43.94	+ 3.682	1	.48	115 8 30.3	4.54
1107	α <sup>1</sup> Herculis...	...	4	.52	17 8 10.40	2.732	...	...	75 27	...
1108	α <sup>2</sup> Herculis...	...	2	.49	17 8 10.78	2.732	...	...	75 27	...
1109	ξ Ophiuchi ...	5.7	3	.49	17 12 29.93	3.571	1	.53	110 57 24.2	4.13
1110	ε Herculis ...	...	...	...	17 12 47	...	1	.45	52 33 28.3	4.10
1111	B.A.C. 5853...	7.0	1	.57	17 13 12.01	1.519	2	.47	40 9 18.6	4.06
1112	θ Ophiuchi ...	...	4	.44	17 13 17.62	3.676	5	.45	114 51 13.2	4.04
1113	B.A.C. 5858...	7.4	3	.49	17 14 26.35	3.681	2	.54	114 57 24.5	3.96
1114	ω Herculis ...	5.7	1	.50	17 15 20.98	+ 2.230	...	...	57 21	...
1115	Radcliffe 3750	8.4	2	.02	17 16 23.12	-105.966	3	.46	0 41 48.3	3.80
1116	B.A.C. 5873...	8.0?	1	.57	17 17 12.08	+ 3.754	...	...	117 28	...
1117	δ Ophiuchi ...	4.7	3	.49	17 17 42.25	3.656	1	.49	114 2 24.6	3.68
1118	73 Herculis...	6.0	...	...	17 18 10	...	1	.53	66 54 18.3	3.64
1119	d Ophiuchi ...	...	...	...	17 18 17	...	1	.48	119 44 6.5	+3.63
1120	Rümker 5825.	7.4	2	.49	17 18 41.61	+ 3.018	...	...	87 42	...

1095. Identical with B.A.C. 5757.

1096. Called in sections of R.A. 61 Herculis.

1104, 1115. Identical with R.H.C. 2565 and the star η of that Catalogue.

1105. Identical with B.A.C. 5813.

1114. Called in preceding sections 72 Herculis.

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No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1121	B.A.C. 5895 ...	...	1	.48	17 19 32.14	+ 2.076	...	...	52 55	...
1122	B.A.C. 5896 ...	7.5	1	.57	17 19 53.27	3.695	...	...	115 23	...
1123	$\beta$ Draconis ...	...	...	...	17 27 13	...	2	.48	37 35 30.9	+ 2.86
1124	$\nu^1$ Draconis ...	5.0	...	...	17 29 23	...	2	.54	34 43 5.2	2.68
1125	$\nu^3$ Draconis ...	5.0	...	...	17 29 28	...	1	.54	34 43 47.0	2.67
1126	$\delta$ Draconis.....	4.7	...	...	17 32 32	...	4	.51	21 46 30.3	2.39
1127	B.A.C. 5988 ...	6.7	...	...	17 35 16	...	1	.54	65 24 51.5	2.16
1128	$\epsilon$ Herculis .....	4.0	5	.55	17 35 27.30	+ 1.690	2	.44	43 55 0.1	2.14
1129	$\beta$ Ophiuchi ...	...	...	...	17 36 28	...	1	.57	85 22 11.7	2.06
1130	29 Draconis ...	7.0	...	...	17 36 37	...	1	.56	15 41 14.6	2.04
1131	84 Herculis ...	6.3	...	...	17 37 32	...	1	.53	65 36 27.9	1.96
1132	$\omega$ Draconis ...	5.5	2	.49	17 37 46.87	- 0.364	...	...	21 11	...
1133	3 Sagittarii ...	5.7	2	.55	17 38 37.76	+ 3.771	...	...	117 46	...
1134	B.A.C. 6012 ...	7.7	1	.58	17 38 59.89	2.936	...	...	84 14	...
1135	Lalande 32461. ...	...	...	...	17 39 40	...	1	.57	84 10 4.4	1.78
1136	$\mu$ Herculis.....	...	1	.48	17 40 54.13	2.342	1	.44	62 11 38.5	2.40
1137	B.A.C. 6030 ...	6.5	...	A.	17 42 38	...	3	.53	70 41 46.5	1.52
1138	87 Herculis ...	6.1	2	.55	17 43 3.70	+ 2.430	2	.56	64 19 37.9	1.48
1139	$\psi^1$ Draconis (2)	6.0	1	.57	17 44 30.34	- 1.089	...	...	17 47	...
1140	30 Draconis ...	5.1	2	.48	17 45 40.63	+ 1.434	3	.53	39 11 1.7	1.25
1141	63 Ophiuchi ...	6.7	2	.56	17 46 9.93	+ 3.689	1	.55	114 51 17.2	1.21
1142	Radcliffe 3796.	9.5	2	.31	17 47 29.16	- 22.127	...	...	3 2	...
1143	B.A.C. 6059 ...	7.7	1	.58	17 47 32.75	+ 3.743	1	.54	116 44 32.7	1.09
1144	Radcliffe 3798.	8.5	5	.24	17 48 2.10	- 22.180	2	.57	3 1 42.9	1.04
1145	B.A.C. 6065 ...	6.7	2	.55	17 48 9.15	+ 3.448	...	...	105.47	...
1146	4 Sagittarii ...	...	...	...	17 51 8	...	1	.48	113 47 56.6	0.78
1147	5 Sagittarii ...	7.2	2	.54	17 51 29.44	3.673	2	.55	114 16 7.2	0.75
1148	$\xi$ Herculis .....	4.3	2	.57	17 52 14.68	2.322	...	...	60 44	...
1149	$\zeta$ Serpentis ...	...	1	.59	17 52 58.98	+ 3.156	...	...	93 41	...
1150	$\gamma$ Draconis ...	...	...	...	17 53 19	...	3	.57	38 29 35.1	0.62
1151	R.H.C. 2693 ...	8.5	5	.56	17 56 18.52	- 10.352	...	...	5 43	...
1152	$\gamma^3$ Sagittarii ...	...	...	...	17 56 41	...	1	.49	120 25 20.5	0.30
1153	$\psi^3$ Draconis ...	5.7	...	...	17 57 38	...	1	.53	17 58 57.8	+ 0.21
1154	R.H.C. 2698 ...	9.3	3	.58	17 57 48.30	- 10.354	...	...	5 41	...
1155	70 Ophiuchi (1)	...	2	.53	17 58 16.71	+ 3.011	...	...	87 28	...

1142, 1144. Identical with R.H.C. 2670 and 2673, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1156	70 Ophiuchi (2)	6.2	1	.53	17 58 17.17	+3.011	2	.54	87 27 53.0	+0.16
1157	B.A.C. 6124 ...	6.0	...	...	17 58 24	...	1	.57	98 19 53.4	+0.14
1158	B.A.C. 6132 ...	7.0	...	...	18 0 9	...	2	.58	115 29 18.6	-0.01
1159	100 Hercules (N)	6.7	...	...	18 2 6	...	1	.57	63 55 1.7	0.19
1160	12 Sagittarii ...	7.0	3	.52	18 4 25.20	3.642	3	.54	113 8 50.8	0.38
1161	μ Sagittarii ...	...	...	...	18 5 16	...	1	.63	111 5 32.5	0.46
1162	B.A.C. 6184 ...	7.3	3	.55	18 7 30.47	1.072	4	.57	33 45 52.1	0.65
1163	B.A.C. 6185 ...	6.3	3	.58	18 7 36.87	1.215	4	.55	35 45 17.2	0.66
1164	B.A.C. 6199 ...	6.3	...	...	18 9 55	...	1	.59	115 39 11.5	0.87
1165	B.A.C. 6201 (1)	7.2	2	.54	18 10 23.02	3.522	...	...	108 40	...
1166	B.A.C. 6201 (2)	8.3	2	.56	18 10 24.05	+3.522	...	...	108 40	...
1167	40 Draconis ...	5.7	2	.58	18 10 39.33	-4.486	1	.56	10 1 23.6	0.94
1168	41 Draconis ...	5.7	2	.58	18 10 45.62	-4.488	2	.55	10 1 11.8	0.94
1169	δ Sagittarii ...	...	2	.54	18 11 54.39	+3.838	1	.48	119 53 2.4	1.04
1170	B.A.C. 6218 ...	6.4	2	.57	18 12 36.53	1.915	1	.60	49 7 1.6	1.10
1171	γ Serpentis ...	...	2	.54	18 13 57.74	3.139	...	...	92 56	...
1172	Radcliffe 3900 ...	8.3	...	...	18 14 43	...	1	.59	5 36 24.4	1.29
1173	ε Sagittarii ...	...	2	.57	18 14 45.12	3.986	...	...	124 27	...
1174	108 Hercules ...	6.0	2	.54	18 15 28.87	2.307	3	.54	60 12 21.9	1.36
1175	B.A.C. 6245 ...	5.5	1	.53	18 16 32.57	+2.644	2	.56	72 14 31.7	1.44
1176	Radcliffe 3921 ...	7.7	3	.21	18 17 23.54	-14.541	2	.57	4 19 49.1	1.52
1177	109 Hercules ...	...	1	.49	18 17 38.73	+2.540	1	.57	68 17 30.9	1.54
1178	38 Draconis ...	6.5	1	.54	18 17 48.80	-0.346	...	...	21 19	...
1179	δ Ursæ Min. ...	...	1	.57	18 18 9.55	-19.342	...	...	3 24	...
1180	λ Sagittarii ...	...	2	.54	18 19 12.55	+3.706	1	.48	115 29 44.1	1.68
1181	B.A.C. 6288 ...	6.8	1	.59	18 21 18.58	-0.896	1	.53	18 33 13.6	1.86
1182	Radcliffe 3989 ...	7.7	...	...	18 22 17	...	1	.60	1 45 29.1	1.94
1183	Radcliffe 3969 ...	8.0	...	...	18 22 54	...	1	.54	2 35 44.5	2.00
1184	B.A.C. 6292 ...	6.8	4	.54	18 22 59.46	+3.529	2	.56	108 59 42.9	2.01
1185	24 Ursæ Min. ...	6.1	9	.39	18 23 20.04	-22.132	...	...	3 1	...
1186	χ Draconis ...	4.5	...	...	18 23 36	...	2	.58	17 19 49.9	2.07
1187	B.A.C. 6304 ...	7.2	2	.56	18 24 33.75	+3.669	1	.59	114 12 32.3	2.14
1188	42 Draconis ...	5.6	1	.59	18 25 34.46	0.158	2	.59	24 31 28.4	2.23
1189	25 Sagittarii ...	6.8	1	.54	18 25 51.67	3.671	2	.55	114 19 35.3	2.26
1190	1 Aquilæ ...	5.0	5	.56	18 27 28.85	+3.265	2	.58	98 20 23.7	-2.40

1172, 1176, 1182, 1183. Identical with R.H.C. 2744, 2751, 2770, and 2769, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N. P. D.
					h. m. s.	s.			° ' "	"
1191	B.A.C. 6336 ...	6.2	...	...	18 29 24	...	3	.58	111 30 41.4	-2.56
1192	B.A.C. 6338 ...	...	...	...	18 29 32	...	1	.54	115 32 17.3	2.57
1193	B.A.C. 6347 ...	6.2	3	.58	18 30 25.50	+3.584	1	.63	111 9 55.1	2.65
1194	* .....	7.7	...	...	18 32 6	...	1	.59	51 35 52.7	2.80
1195	$\alpha$ Lyrae .....	...	1	.63	18 32 8.04	2.030	...	...	51 21	...
1196	B.A.C. 6368 ...	7.5	...	...	18 35 44	...	2	.55	34 53 6.3	3.11
1197	B.A.C. 6369 ...	5.5	...	...	18 36 6	...	2	.57	115 8 56.3	3.14
1198	$\phi$ Sagittarii ...	4.0	1	.63	18 36 47.04	+3.747	2	.63	117 7 56.9	3.20
1199	B.A.C. 6374 ...	7.1	...	...	18 37 8	...	3	.56	117 38 35.7	3.23
1200	Radcliffe 4069 .	7.7	2	.52	18 39 15.08	-18.473	...	...	3 30	...
1201	$\epsilon^1$ Lyrae (1st) .	5.3	4	.55	18 39 37.90	+1.984	...	...	50 29	...
1202	$\epsilon^1$ Lyrae (2d)...	6.5	4	.55	18 39 38.08	1.984	...	...	50 29	...
1203	$\epsilon^3$ Lyrae (1st) .	5.3	4	.61	18 39 40.27	1.986	1	.53	50 32 0.4	3.45
1204	$\epsilon^3$ Lyrae (2d)...	5.0	4	.61	18 39 40.60	+1.986	...	...	50 32	...
1205	$\zeta^2$ Lyrae.....	6.0	...	...	18 39 55	...	1	.59	52 33 7.4	3.47
1206	B.A.C. 6396 ...	7.9	1	.59	18 40 44.84	+3.750	1	.59	117 16 49.6	3.55
1207	111 Herculis ...	5.3	2	.63	18 40 45.07	2.642	...	...	71 58	...
1208	B.A.C. 6408 ...	7.5?	...	...	18 42 37	...	1	.54	117 19 29.7	3.71
1209	$\nu^1$ Lyrae.....	6.0	2	.58	18 44 28.83	2.230	...	...	57 21	...
1210	$\nu^3$ Lyrae.....	6.2	2	.59	18 44 34.74	2.239	...	...	57 37	...
1211	$\beta^1$ Lyrae .....	...	2	.53	18 44 50.24	2.212	1	.57	56 48 0.6	3.87
1212	$\beta^3$ Lyrae .....	7.6	5	.55	18 44 52.10	2.213	1	.60	56 48 39.7	3.90
1213	$\nu^1$ Sagittarii ...	5.0	...	...	18 45 36	...	1	.55	112 54 56.7	3.87
1214	$\sigma$ Sagittarii ...	3.0	...	...	18 46 28	...	1	.63	116 28 7.8	4.04
1215	B.A.C. 6447 ...	5.7	...	...	18 47 22	...	1	.58	106 32 46.2	4.12
1216	$\theta^1$ Serpentis ...	...	...	...	18 49 10	...	1	.56	85 58 40.4	4.27
1217	$\theta^3$ Serpentis ...	5.0	...	...	18 49 10	...	1	.54	85 58 45.8	4.27
1218	13 Lyrae .....	4.5	5	.58	18 51 0.79	1.822	3	.59	46 14 20.8	4.43
1219	$\zeta$ Sagittarii ...	...	2	.63	18 53 34.70	3.824	...	...	120 5	...
1220	$\gamma$ Lyrae .....	...	2	.56	18 53 37.87	+2.242	1	.63	57 30 10.6	4.65
1221	B.A.C. 6490 ...	6.0	...	...	18 53 46	...	2	.58	115 2 18.6	4.66
1222	R.H.C. 2859 ...	9.1	5	.15	18 54 43.94	-10.378	2	.35	5 31 2.4	4.75
1223	B.A.C. 6505 ...	7.5	2	.57	18 56 2.70	+3.688	2	.54	115 26 10.4	4.86
1224	16 Lyrae .....	5.8	4	.61	18 57 25.20	1.695	2	.61	43 15 53.5	4.97
1225	$\tau$ Sagittarii ...	4.0	1	.60	18 58 4.58	+3.755	1	.59	117 52 25.5	-5.03

1204. Identical with R.H.C. 2811.

No.	Name of Star.	Mag.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Precession in R. A.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ' "	"
1226	$\lambda$ Aquilæ .....	...	...	...	18 58 42	...	1	63	95 5 34.0	-5.09
1227	$\zeta$ Aquilæ .....	...	2	58	18 58 53.06	+2.752	...	...	76 21	...
1228	(R) Aquilæ ...	7.1	2	57	18 59 31.87	+2.889	2	58	81 58 56.3	5.15
1229	Radcliffe 4208 .	6.8	4	48	19 0 41.89	-18.175	1	63	3 28 32.0	5.25
1230	Lal. 35819-20 .	6.2	3	59	19 0 43.18	+2.496	...	...	65 58	...
1231	B.A.C. 6547 ...	6.0	...	...	19 1 0	...	2	55	61 35 32.2	5.28
1232	B.A.C. 6563 ...	6.6	3	64	19 3 52.67	-2.430	1	67	13 9 18.4	5.51
1233	B.A.C. 6562 ...	6.0	3	58	19 4 28.97	+3.701	2	59	116 8 27.7	5.57
1234	B.A.C. 6567 ...	7.7	1	63	19 5 20.09	2.287	...	...	58 35	...
1235	$\psi$ Sagittarii ...	6.0	2	56	19 6 49.92	3.681	1	57	115 29 50.7	5.77
1236	* .....	7.2	2	63	19 9 14.61	2.627	2	59	70 49 31.5	5.96
1237	$d$ Sagittarii ...	5.2	3	56	19 9 19.59	3.515	3	64	109 12 8.8	5.98
1238	$\omega$ Aquilæ .....	5.8	5	62	19 11 9.07	2.814	...	...	78 39	...
1239	$24$ Aquilæ .....	6.5	...	...	19 11 35	...	2	62	89 55 0.0	6.16
1240	$\delta$ Draconis .....	...	1	57	19 12 30.73	0.017	1	56	22 35 18.9	6.24
1241	$f$ Aquilæ .....	5.4	1	53	19 12 58.00	3.197	2	56	95 40 41.3	6.27
1242	$\chi^1$ Sagittarii ...	5.6	...	...	19 16 38	...	2	62	114 46 48.6	6.58
1243	$b$ Aquilæ .....	...	...	...	19 18 12	...	1	65	78 21 23.3	6.71
1244	$\delta$ Aquilæ .....	...	5	59	19 18 20.26	3.024	3	60	87 9 54.5	6.82
1245	B.A.C. 6652 ...	6.4	2	58	19 19 10.95	2.613	1	54	70 0 20.7	6.79
1246	B.A.C. 6657 ...	6.5	...	...	19 19 33	...	2	61	65 20 29.0	6.83
1247	B.A.C. 6666 ...	6.2	3	65	19 21 5.03	3.717	2	63	117 16 19.6	6.95
1248	$\alpha$ Vulpeculæ ...	4.5	2	62	19 22 47.79	2.504	3	61	65 37 11.5	7.09
1249	$8$ Vulpeculæ ...	5.5	...	...	19 23 1	...	1	58	65 31 17.5	7.11
1250	$\beta^2$ Cygni .....	6.0	2	54	19 25 1.94	2.418	1	57	62 19 50.2	7.27
1251	$\epsilon^2$ Cygni .....	5.0	3	61	19 26 7.41	1.512	1	60	38 34 17.0	7.36
1252	$\mu$ Aquilæ .....	...	1	65	19 27 9.09	2.917	...	...	82 55	...
1253	$\lambda^1$ Sagittarii ...	6.3	...	...	19 27 24	...	1	65	115 1 35.1	7.47
1254	$\lambda^2$ Sagittarii ...	5.0?	2	64	19 28 3.79	3.657	1	63	115 11 35.1	7.54
1255	B.A.C. 6712 ...	6.6	4	58	19 28 46.39	1.066	4	60	31 42 4.7	7.58
1256	$42$ Aquilæ .....	6.4	2	62	19 30 15.16	3.178	1	64	94 57 39.4	7.69
1257	B.A.C. 6723 ...	...	...	...	19 30 39	...	1	66	39 3 59.9	7.73
1258	$53$ Sagittarii ...	6.7	...	...	19 31 17	...	1	57	113 44 49.0	7.78
1259	B.A.C. 6727 ...	6.4	2	65	19 31 34.62	+3.612	1	58	113 45 2.6	-7.80
1260	$\sigma$ Draconis ...	5.3	2	62	19 32 37.74	-0.204	...	...	20 35	...

1229. Identical with R.H.C. 2882.

1230. This star is denoted in the Observations with the Transit Instrument as B.A.C. 6542, from which it differs + 34". See *Rad. Obs.* Vol. XVII.



No.	Name of Star.	Mag.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1261	$\theta$ Cygni.....	...	...	...	19 32 38	...	1	67	40 6 23.3	-7.89
1262	Groom. 2896...	9.1	4	.54	19 33 0.35	+1.613	...	...	40 7	...
1263	B.A.C. 6741 ...	6.7	1	.59	19 34 0.11	+1.663	...	...	41 3	...
1264	Radcliffe 4447.	8.3	1	.09	19 34 46.30	-26.157	...	...	2 25	...
1265	B.A.C. 6746 ...	5.7	1	.56	19 35 27.76	+3.416	1	65	105 47 45.6	8.12
1266	B.A.C. 6750 ...	7.0	...	...	19 36 0	...	1	60	71 52 0.8	8.16
1267	$c^1$ Cygni .....	5.7	...	...	19 38 2	...	2	57	39 48 11.5	8.32
1268	$c^2$ Cygni .....	6.3	2	.59	19 38 5.23	1.612	2	56	39 48 38.8	8.32
1269	$\eta$ Cygni .....	5.5	2	.65	19 39 9.44	2.156	1	64	52 59 10.6	8.41
1270	$\gamma$ Aquilæ .....	...	...	...	19 39 30	...	2	68	79 43 47.6	8.44
1271	B.A.C. 6773 ...	7.0	3	.62	19 39 37.59	3.543	1	58	111 18 15.7	8.45
1272	$\eta$ Cygni .....	...	...	...	19 41 2	...	1	65	56 36 3.5	8.55
1273	$\delta$ Sagittæ .....	...	1	.60	19 41 3.39	2.674	...	...	71 49	...
1274	B.A.C. 6785 ...	6.3	1	.67	19 41 12.43	+3.310	...	...	101 13	...
1275	Radcliffe 4476.	7.8	1	.60	19 43 23.19	-13.258	1	67	4 12 51.5	8.75
1276	$\alpha$ Aquilæ .....	...	5	.61	19 43 51.22	+2.928	...	...	81 30	...
1277	$\epsilon$ Aquilæ .....	...	...	...	19 44 13	...	1	71	79 56 10.8	8.71
1278	Radcliffe 4489.	8.8	2	.61	19 45 9.42	-13.177	3	64	4 13 9.7	8.89
1279	$\eta$ Cygni .....	6.0	...	...	19 45 32	...	1	59	51 38 27.2	8.91
1280	$\omega$ Sagittarii ...	5.7	3	.63	19 47 8.35	+3.670	1	70	116 40 21.9	9.04
1281	$\xi$ Aquilæ .....	5.1	2	.67	19 47 21.97	2.901	2	61	81 54 12.9	9.06
1282	$\zeta$ Aquilæ .....	6.2	2	.60	19 47 28.12	+3.073	1	64	90 5 40.3	9.06
1283	R.H.C. 3000 ...	9.8	3	.67	19 49 20.28	-13.206	1	60	4 10 24.7	9.21
1284	$\rho$ Sagittarii ...	6.0	1	.59	19 49 53.61	+3.408	1	65	105 51 56.4	9.26
1285	$\eta$ Sagittæ.....	6.0	...	...	19 51 19	...	2	61	73 35 26.0	9.36
1286	R.H.C. 3015 ...	9.4	3	.52	19 53 10.27	-16.917	2	66	3 22 14.8	9.51
1287	B.A.C. 6867 ...	5.3	1	.64	19 53 13.03	+1.152	...	...	31 32	...
1288	$\alpha$ Cygni .....	5.5	2	.61	19 54 42.72	2.198	1	71	53 20 38.1	9.62
1289	B.A.C. 6878 ...	7.0	1	.66	19 55 19.13	3.568	...	...	112 59	...
1290	B.A.C. 6880 ...	7.0	...	...	19 55 31	...	2	64	105 48 28.6	9.68
1291	B.A.C. 6889 ...	7.5	3	.67	19 56 36.39	3.536	...	...	111 43	...
1292	B.A.C. 6896 ...	...	...	...	19 57 33	...	2	68	73 16 32.5	9.84
1293	$\eta$ Sagittæ.....	...	...	...	19 57 44	...	1	63	73 18 44.1	9.86
1294	B.A.C. 6907 ...	6.9	3	.63	20 0 28.26	3.390	...	...	105 26	...
1295	B.A.C. 6911 ...	6.9	3	.67	20 0 45.42	+3.284	1	60	100 28 15.8	-10.08

1262. This is the variable star commonly denoted (R) Cygni.

1264, 1275, 1278. Identical with R.H.C. 2973, 2989, and 2990, respectively.

1268. Called in Observations with the Transit Instrument,  $\eta$  Cygni (2).1272. Called in the B.A.C.,  $\chi$  Cygni.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1296	B.A.C. 6923 ...	7.2	1	.63	20 8 11.65	+ 3.485	1	.66	109 47 35.4	-10.19
1297	Rümker 8047 .	6.7	2	.65	20 3 15.41	2.909	2	.67	81 57 54.9	10.28
1298	69 Draconis ...	...	...	...	20 3 32	...	1	.65	13 55 2.1	10.29
1299	δ <sup>3</sup> Cygni .....	...	...	...	20 4 9	...	1	.67	53 34 35.8	10.34
1300	ξ <sup>2</sup> Capricorni...	6.3	3	.64	20 4 31.08	3.335	...	...	103 2	...
1301	B.A.C. 6941 ...	6.5	1	.70	20 4 48.66	+ 2.638	...	...	69 17	...
1302	λ Ursæ Min. ...	6.4	4	.14	20 5 45.60	-55.725	1	.70	1 6 55.9	10.44
1303	δ <sup>3</sup> Cygni .....	5.0	1	.67	20 9 13.16	+ 2.238	1	.65	53 37 35.7	10.72
1304	68 Draconis ...	6.0	2	.38	20 9 15.00	0.977	...	...	28 21	...
1305	4 Capricorni ...	6.3	1	.71	20 9 40.47	3.532	2	.71	112 14 41.6	10.75
1306	α <sup>2</sup> Capricorni .	...	1	.60	20 10 10.43	+ 3.333	1	.60	102 58 58.7	10.79
1307	Radcliffe 4721 .	8.6	4	.61	20 11 5.99	-11.129	...	...	4 32	...
1308	B.A.C. 6986 ...	6.0	1	.70	20 11 52.09	+ 2.132	2	.65	50 4 21.2	10.91
1309	B.A.C. 7006 ...	6.7	2	.69	20 14 29.59	2.241	...	...	53 19	...
1310	* .....	8.0	1	.64	20 14 29.88	3.411	...	...	106 58	...
1311	B.A.C. 7009 ...	7.1	2	.62	20 15 29.58	3.362	...	...	104 43	...
1312	B.A.C. 7017 ...	6.3	...	...	20 16 2	...	3	.64	23 36 9.5	11.21
1313	γ Cygni .....	...	2	.64	20 17 7.97	+ 2.150	...	...	50 12	...
1314	π Capricorni ...	5.0	...	...	20 19 11	...	1	.72	108 40 30.7	11.44
1315	Groom. 3212 ...	7.0	3	.18	20 19 37.11	- 7.811	...	...	5 45	...
1316	ρ Capricorni ...	...	...	...	20 20 45	...	1	.70	108 16 48.8	11.55
1317	72 Draconis ...	8.3	2	.68	20 21 5.90	+ 1.034	...	...	28 11	...
1318	B.A.C. 7049 ...	6.0	1	.71	20 21 11.13	3.531	2	.73	112 51 32.3	11.58
1319	69 Aquilæ .....	...	...	...	20 22 14	...	1	.64	93 21 17.2	11.66
1320	Oelt. Arg. 20562	7.3	1	.60	20 22 46.21	3.388	...	...	106 15	...
1321	R.H.C. 3102 ...	9.3?	...	...	20 23 7	...	1	.66	5 15 54.2	11.73
1322	B.A.C. 7069 ...	8.0	1	.64	20 23 54.62	3.522	...	...	112 38	...
1323	B.A.C. 7070 ...	8.5	1	.64	20 23 56.60	3.522	1	.65	112 38 18.6	11.78
1324	B.A.C. 7083 ...	6.0	2	.64	20 25 17.84	1.977	1	.70	44 33 6.7	11.88
1325	B.A.C. 7090 ...	...	1	.70	20 26 30.35	+ 0.375	...	...	21 42	...
1326	Radcliffe 4881 .	7.5	6	.29	20 28 47.54	- 8.274	1	.65	5 21 30.0	12.12
1327	Groom. 3260 ...	7.4	...	...	20 29 37	...	2	.65	5 54 46.4	12.18
1328	26 Vulpeculæ .	6.7	1	.63	20 30 3.19	+ 2.567	...	...	64 37	...
1329	Radcliffe 4894 .	6.9	4	.32	20 30 32.33	- 8.273	...	...	5 20	...
1330	υ Capricorni ...	...	...	...	20 31 58	...	2	.71	108 38 9.7	-12.34

1303. Called in sections of R. A. 63 Cygni.

1307, 1326, 1329. Identical with R.H.C. 3067, 3120, and 3128, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1331	1 Aquarii .....	...	...	...	20 32 8	...	1	76	90 0 35.7	-12.37
1332	κ Delphini.....	...	1	.63	20 32 13.81	+2.893	...	...	80 25	...
1333	W.B. xx. 821 ..	8.0	1	.64	20 32 25.12	+2.989	1	77	85 31 46.0	12.38
1334	24 Cephei (Hev)	8.2	2	.68	20 32 28.50	-43.041	...	...	1 18	...
1335	(S) Capricorni.	9.0	1	.66	20 33 36.44	+3.443	1	66	109 33 37.0	12.46
1336	B.A.C. 7157 ...	6.5	1	.63	20 33 58.37	2.788	...	...	74 51	...
1337	Radcliffe 4926 ..	8.5	...	...	20 35 20	...	1	65	4 11 20.0	12.58
1338	B.A.C. 7169 ...	...	...	...	20 35 37	...	1	63	9 3 7.3	12.60
1339	α Cygni.....	...	1	.70	20 36 35.64	+2.043	1	70	45 13 31.9	12.66
1340	74 Draconis ...	6.0	1	.64	20 37 30.35	-3.166	1	64	9 24 31.5	12.72
1341	ψ Capricorni...	5.0	1	.71	20 37 40.90	+3.570	...	...	115 47	...
1342	51 Cygni .....	6.0	1	.63	20 37 49.98	+1.848	1	67	40 10 7.2	12.75
1343	Oelt. Arg. 21012	7.3	1	.63	20 39 11.52	-0.783	1	63	14 55 31.1	12.83
1344	γ <sup>1</sup> Delphini ...	...	1	.70	20 40 3.21	+2.785	...	...	74 23	...
1345	Radcliffe 4980 ..	8.3	1	.18	20 40 16.15	-20.272	...	...	2 30	...
1346	B.A.C. 7217 ...	7.0	2	.67	20 41 28.67	-2.133	2	67	11 4 32.5	12.99
1347	η Cephei .....	...	2	.61	20 42 23.84	+1.218	1	76	28 42 42.7	13.05
1348	15 Delphini ...	6.5	2	.67	20 42 51.86	2.855	...	...	77 59	...
1349	ω Capricorni...	5.0	...	...	20 43 20	...	4	69	117 26 52.1	13.11
1350	32 Vulpeculae .	5.1	5	.65	20 48 30.54	2.554	1	70	62 28 50.3	13.46
1351	B.A.C. 7262 ...	...	...	...	20 49 15	...	1	74	36 1 38.0	13.50
1352	B.A.C. 7268 ...	...	1	.63	20 51 2.06	2.022	...	...	43 7	...
1353	18 Delphini ...	6.0	2	.67	20 51 35.44	2.893	...	...	79 43	...
1354	1 Equulei (1st)	5.4	2	.65	20 51 58.80	3.007	...	...	86 15	...
1355	1 Equulei (2d).	7.6	2	.65	20 51 59.63	3.007	1	67	86 14 53.2	13.68
1356	Oelt. Arg. 21410	7.5	...	...	20 52 11	...	2	67	15 46 55.9	13.69
1357	10 Aquarii.....	6.4	...	...	20 53 3	...	2	71	96 1 43.8	13.75
1358	11 Aquarii.....	...	...	...	20 53 5	...	1	72	95 16 35.5	13.75
1359	B.A.C. 7290 ...	...	1	.70	20 53 14.60	2.134	...	...	46 5	...
1360	B.A.C. 7300 ...	7.7	1	.63	20 54 57.23	+3.534	1	64	115 37 51.8	13.87
1361	Radcliffe 5090 ..	7.9	3	.51	20 56 3.27	-8.215	...	...	4 52	...
1362	η Capricorni...	5.5	1	.70	20 56 19.47	+3.428	2	71	110 24 49.9	13.95
1363	θ Capricorni...	...	3	.71	20 57 57.72	3.377	1	71	107 47 40.6	14.06
1364	4 Equulei .....	6.0	...	...	20 58 25	...	1	77	84 36 4.8	-14.08
1365	B.A.C. 7334 ...	...	1	.64	21 0 11.97	+3.172	...	...	96 9	...

1337, 1345, 1361. Identical with R.H.C. 3141, 3160, and 3200, respectively.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1366	χ Capricorni ...	5.8	1	.67	21 0 25.29	+ 3.448	1	.76	111 45 41.4	-14.21
1367	B.Z. 314. 125.	8.3	2	.65	21 1 22.19	2.337	...	...	52 1	...
1368	27 Capricorni ...	7.0	1	.71	21 1 25.40	3.434	...	...	111 7	...
1369	Lalande 41030.	...	...	...	21 2 32	...	1	.70	52 2 34.3	14.34
1370	γ Equulei .....	5.7	...	...	21 3 27	...	2	.69	80 31 42.2	14.39
1371	ζ Cygni .....	...	...	...	21 6 54	...	2	.77	60 21 13.4	14.53
1372	τ Cygni .....	4.6	3	.69	21 9 7.56	2.376	1	.70	52 33 32.6	14.74
1373	W.B. xxi. 246.	9.1	2	.68	21 11 31.40	2.940	3	.71	81 41 4.7	14.88
1374	W.B. xxi. 249.	7.5	2	.70	21 11 38.44	+ 2.939	2	.66	81 38 1.1	14.88
1375	R.H.C. 3232 ...	8.6	2	.45	21 12 13.24	- 7.806	1	.77	4 41 49.2	14.91
1376	ι Capricorni ...	5.3	3	.67	21 14 20.17	+ 3.349	2	.67	107 26 13.2	15.04
1377	ι Pegasi (2d)...	...	1	.73	21 15 31.11	2.764	1	.72	70 48 5.0	15.11
1378	33 Capricorni ...	5.5	1	.66	21 16 6.15	3.416	1	.70	111 27 14.5	15.15
1379	B.A.C. 7438 ...	...	...	...	21 17 12	...	1	.73	13 35 13.2	15.21
1380	19 Aquarii.....	6.2	2	.66	21 17 34.93	3.229	...	...	100 21	...
1381	ζ Capricorni ...	...	...	...	21 18 33	...	1	.77	113 1 27.1	15.29
1382	Piazzi xxi. 127.	8.4	2	.69	21 20 6.98	3.424	2	.73	112 19 49.5	15.37
1383	B.A.C. 7468 ...	6.5	2	.67	21 22 4.26	1.971	...	...	37 43	...
1384	β Aquarii .....	...	...	...	21 24 5	...	2	.65	96 11 39.8	15.60
1385	9 Cygni .....	5.4	2	.65	21 24 12.75	2.203	...	...	44 5	...
1386	B.A.C. 7484 ...	...	...	...	21 24 47	...	1	.71	6 20 42.8	15.63
1387	Radcliffe 5290.	8.5	...	...	21 25 48	...	1	.76	3 2 31.7	15.68
1388	B.A.C. 7485 ...	7.0	...	...	21 25 49	...	2	.73	106 49 25.5	15.68
1389	β <sup>1</sup> Cephei.....	8.0	2	.69	21 26 46.80	0.804	...	...	20 4	...
1390	B.A.C. 7494 ...	7.0	2	.72	21 26 56.66	+ 1.704	...	...	31 12	...
1391	B.A.C. 7510 ...	6.3	1	.73	21 28 52.43	- 1.529	...	...	10 6	...
1392	72 Cygni .....	...	...	...	21 28 59	...	1	.72	52 6 3.3	15.86
1393	ε Capricorni ...	...	...	...	21 29 8	...	1	.66	110 6 1.6	15.86
1394	ξ Aquarii .....	5.0	1	.67	21 30 11.25	+ 3.192	...	...	98 29	...
1395	3 Pegasi (1st) .	7.7	...	...	21 30 39	...	1	.74	84 0 26.0	15.94
1396	3 Pegasi (2d) .	...	...	...	21 30 40	...	1	.77	84 1 4.5	15.94
1397	5 Pegasi.....	6.0	2	.72	21 31 6.80	2.797	1	.73	71 19 7.6	15.97
1398	γ Capricorni ...	...	3	.72	21 32 13.15	3.321	1	.64	107 18 8.2	-16.03
1399	41 Capricorni .	5.5	3	.73	21 33 55.25	3.423	...	...	113 54	...
1400	κ Capricorni ...	5.3	2	.66	21 34 43.43	+ 3.352	...	...	109 31	...

1385. Called in Observations with the Transit Instrument 71 Cygni.

1387. Identical with R.H.C. 3270.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ' "	"
1401	B.A.C. 7553 ...	6.7	3	.75	21 35 36.63	+ 2.929	...	...	79 49	...
1402	45 Capricorni ...	...	...	...	21 36 16	...	1	.71	105 23 51.9	-16.24
1403	B.A.C. 7562 ...	7.2	1	.64	21 37 20.85	3.204	1	.77	99 41 15.5	16.29
1404	$\mu^1$ Cygni .....	5.3	1	.77	21 37 47.69	2.655	...	...	61 54	...
1405	$\mu^2$ Cygni .....	6.0	2	.69	21 37 48.00	2.655	...	...	61 54	...
1406	$\mu$ Cephei .....	...	...	...	21 39 10	...	1	.68	31 52 13.7	16.38
1407	B.A.C. 7584 ...	6.7	1	.70	21 39 30.25	2.713	...	...	65 4	...
1408	11 Cephei .....	...	1	.73	21 39 49.47	0.883	...	...	19 21	...
1409	B.A.C. 7586 ...	7.0	1	.77	21 39 56.23	2.714	1	.74	65 5 34.1	16.43
1410	B.A.C. 7590 ...	7.0	...	...	21 40 20	...	3	.72	73 27 37.7	16.45
1411	R.H.C. 3322 ...	...	...	...	21 43 15	...	1	.70	4 19 23.9	16.59
1412	16 Pegasi .....	5.7	2	.66	21 46 36.14	2.726	1	.78	64 44 28.8	16.75
1413	B.A.C. 7628 ...	...	...	...	21 46 45	...	1	.71	94 56 26.3	16.76
1414	W.B. xxi. 1125	9.4	1	.71	21 48 6.92	+ 2.959	2	.77	81 13 37.5	16.82
1415	B.A.C. 7642 ...	...	...	...	21 49 57	...	1	.68	36 44 22.4	16.91
1416	R.H.C. 3347 ...	8.1	3	.19	21 52 24.01	- 8.006	2	.74	3 38 57.6	17.03
1417	* .....	9.0	...	...	21 53 35	...	2	.75	37 49 28.8	17.08
1418	20 Pegasi .....	6.0	3	.70	21 54 10.33	+ 2.917	...	...	77 33	...
1419	B.A.C. 7676 ...	6.2	4	.75	21 56 38.58	2.188	1	.70	37 48 5.6	17.22
1420	32 Aquarii .....	6.0	3	.68	21 57 29.23	3.089	1	.72	91 35 28.4	17.26
1421	$\alpha$ Aquarii .....	...	2	.75	21 58 29.31	3.083	...	...	91 0	...
1422	15 Cephei .....	7.0	...	...	21 59 17	...	1	.77	30 52 22.5	17.34
1423	$\xi^2$ Cephei .....	...	...	...	21 59 41	...	1	.76	26 3 49.6	17.35
1424	$\epsilon$ Pegasi .....	...	2	.74	22 0 24.26	2.764	...	...	65 21	...
1425	B.A.C. 7715 ...	...	...	...	22 1 54	...	1	.75	118 59 16.7	17.45
1426	B.A.C. 7720 ...	7.2	4	.76	22 2 57.83	3.123	...	...	94 35	...
1427	B.A.C. 7735 ...	...	...	...	22 3 16	...	1	.73	7 48 52.1	17.51
1428	B.A.C. 7736 (2) ...	...	1	.72	22 3 49.59	2.008	...	...	31 24	...
1429	B.A.C. 7740 ...	7.5	1	.70	22 4 42.21	3.205	...	...	101 46	...
1430	B.A.C. 7744 ...	...	1	.78	22 5 19.99	3.131	...	...	95 25	...
1431	B.A.C. 7745 ...	6.0	2	.77	22 5 45.24	3.380	2	.73	115 52 57.3	17.62
1432	$\lambda$ Piscis Austral.	...	...	...	22 6 15	...	1	.77	118 28 9.9	17.63
1433	B.A.C. 7753 ...	5.7	1	.77	22 6 31.05	2.644	1	.78	56 5 40.2	17.64
1434	B.A.C. 7760 (2) ...	6.0	1	.82	22 7 23.90	1.390	...	...	20 34	...
1435	$\theta$ Aquarii .....	4.7	3	.75	22 9 20.31	+ 3.170	1	.72	98 29 18.9	-17.73

1406. Identical with B.A.C. 7582.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N. P. D.
					h. m. s.	s.			° ' "	"
1436	B.A.C. 778a ...	6.0	...	...	22 11 19	...	1	.77	33 29 17.2	-17.84
1437	γ Aquarii .....	...	3	.74	22 14 19.22	+3.093	1	.84	92 6 6.1	17.97
1438	* .....	9.6	1	.82	22 14 46.46	1.348	2	.75	18 58 28.7	17.98
1439	* .....	...	1	.82	22 14 51.11	1.351	2	.73	18 59 52.2	17.98
1440	49 Aquarii .....	...	1	.77	22 15 35.61	+3.351	...	...	115 29	...
1441	R.H.C. 3422 ...	8.0	1	.27	22 16 3.28	-3.248	...	...	5 18	...
1442	33 Pegasi .....	...	1	.78	22 16 49.79	+2.857	...	...	69 52	...
1443	50 Aquarii .....	6.3	4	.71	22 16 50.40	3.064	1	.64	104 14 51.3	18.06
1444	53 Aquarii (2d) ...	...	...	...	22 18 52	...	1	.73	107 27 46.2	18.14
1445	34 Pegasi .....	5.7	2	.68	22 19 23.66	3.034	1	.82	86 19 48.3	18.16
1446	* .....	9.9	...	...	22 19 41	...	2	.80	69 58 52.4	18.17
1447	35 Pegasi .....	5.3	1	.77	22 20 40.05	3.032	1	.72	86 0 55.3	18.20
1448	ζ <sup>1</sup> Aquarii .....	...	...	...	22 21 31	...	2	.76	90 44 44.4	18.23
1449	37 Pegasi .....	...	1	.75	22 22 47.20	3.035	...	...	86 17	...
1450	σ Aquarii .....	5.3	1	.64	22 23 7.69	+3.181	1	.64	101 24 10.9	18.30
1451	5 Lacertæ .....	...	...	...	22 23 39	...	3	.79	43 1 9.4	18.30
1452	Groom. 3820 ...	5.5	12	.53	22 24 1.00	-3.674	...	...	4 37	...
1453	58 Aquarii .....	...	1	.77	22 24 9.35	+3.182	...	...	101 38	...
1454	Groom. 3824 ...	6.5	2	.72	22 24 30.74	-3.812	...	...	4 30	...
1455	α Lacertæ .....	...	1	.82	22 25 26.84	+2.442	...	...	40 27	...
1456	ν Aquarii .....	5.0	1	.64	22 26 55.40	3.278	...	...	111 26	...
1457	B.A.C. 7865 ...	6.5	...	...	22 27 20	...	1	.74	90 8 3.4	18.43
1458	η Aquarii .....	...	2	.76	22 28 3.45	3.082	...	...	90 51	...
1459	Piazzi xxii. 158.	7.1	1	.83	22 28 58.79	2.887	3	.78	70 27 17.2	18.50
1460	B.A.C. 7878 ...	6.5	1	.77	22 29 16.38	1.681	...	...	20 22	...
1461	8 Lacertæ (2d). ...	...	1	.78	22 29 33.64	2.656	...	...	51 6	...
1462	B.A.C. 7881 ...	6.0	1	.77	22 29 46.54	1.088	...	...	14 30	...
1463	Radcliffe 5776 .	7.5	...	...	22 30 23	...	1	.85	2 38 28.0	18.54
1464	κ Aquarii .....	...	1	.73	22 30 24.10	3.114	...	...	94 58	...
1465	B.A.C. 7891 ...	6.8	...	...	22 31 52	...	3	.77	119 3 43.0	18.58
1466	31 Cephei .....	5.6	2	.75	22 32 15.66	1.446	...	...	17 6	...
1467	11 Lacertæ ...	...	...	...	22 34 17	...	2	.73	46 27 49.8	18.67
1468	ζ Pegasi .....	...	1	.75	22 34 22.82	+2.987	...	...	79 55	...
1469	45 Pegasi .....	...	...	...	22 38 34	...	1	.73	71 29 46.6	18.80
1470	9 <sup>2</sup> Aquarii .....	5.7	...	...	22 39 55	...	1	.85	110 21 9.3	-18.84

1463. Identical with R.H.C. 3466.

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N.P.D.
					h. m. s.	s.			° ' "	"
1471	B.A.C. 7950 ...	6·7	1	·77	22 40 8·78	+ 2·606	...	...	44 32	...
1472	B.A.C. 7951 (2) ...	...	...	...	22 40 31	...	1	·77	94 57 56·1	18·86
1473	70 Aquarii ...	...	...	...	22 41 2	...	1	·77	101 18 16·2	18·87
1474	Groom. 3888 ...	8·7	1	·83	22 41 11·22	2·613	1	·83	44 32 21·3	18·88
1475	7 <sup>2</sup> Aquarii ...	...	1	·74	22 42 4·41	+ 3·185	...	...	104 20	...
1476	R.H.C. 3493 ...	7·9	1	·30	22 45 20·98	- 4·009	5	·77	3 27 28·8	19·00
1477	15 Lacertæ ...	...	1	·82	22 45 38·18	+ 2·679	...	...	47 27	...
1478	8 Aquarii ...	...	...	...	22 47 7	...	1	·86	106 34 29·2	19·05
1479	51 Pegasi ...	5·3	2	·73	22 50 29·44	+ 2·925	...	...	70 0	...
1480	R.H.C. 3509 ...	7·2	2	·26	22 50 38·49	- 0·735	...	...	5 59	...
1481	B.A.C. 8004 ...	6·0	...	...	22 52 7	...	1	·73	103 49 50·7	19·18
1482	2 Piscium ...	6·1	4	·78	22 52 10·81	+ 3·070	1	·77	89 47 40·4	19·18
1483	3 Piscium ...	7·0	2	·75	22 53 20·95	+ 3·075	...	...	90 35	...
1484	R.H.C. 3519 ...	7·5	1	·30	22 54 3·84	- 0·722	2	·84	5 42 40·7	19·23
1485	R.H.C. 3520 ...	6·1	2	·55	22 54 12·16	- 0·943	3	·82	5 23 16·0	19·23
1486	β Piscium ...	5·0	3	·75	22 56 39·05	+ 3·051	1	·74	86 56 37·3	19·29
1487	α Pegasi ...	...	2	·80	22 57 41·30	2·983	...	...	75 33	...
1488	3 Andromedæ ...	5·5	3	·76	22 57 49·09	2·655	2	·81	40 43 8·9	19·32
1489	B.A.C. 8048 ...	7·0	...	...	22 58 48	...	1	·85	9 59 0·3	19·34
1490	5 Andromedæ ...	6·2	4	·76	23 1 18·97	2·688	...	...	41 29	...
1491	A Piscium ...	...	1	·72	23 1 24·65	3·063	1	·83	88 38 38·8	19·40
1492	B.A.C. 8064 ...	6·7	1	·85	23 2 3·96	3·255	1	·86	118 51 33·8	19·42
1493	2 Cassiopeie ...	6·0	...	...	23 3 41	...	1	·77	31 26 14·1	19·45
1494	Oelt. Arg. 25223 ...	8·2	2	·76	23 3 46·61	2·541	2	·79	31 28 54·5	19·45
1495	6 Andromedæ ...	6·5	1	·83	23 3 54·01	2·770	...	...	47 13	...
1496	60 Pegasi ...	6·0	...	...	23 4 56	...	1	·74	63 55 8·9	19·48
1497	B.A.C. 8083 ...	5·7	2	·76	23 6 27·75	2·604	...	...	33 37	...
1498	ψ <sup>1</sup> Aquarii ...	5·5	1	·76	23 8 26·97	3·122	...	...	99 52	...
1499	B.A.C. 8104 ...	6·6	2	·80	23 9 35·28	2·088	4	·82	16 32 33·4	19·57
1500	γ Piscium ...	...	1	·77	23 9 48·31	3·106	...	...	87 30	...
1501	ψ <sup>2</sup> Aquarii ...	...	...	...	23 10 31	...	2	·79	99 57 25·8	19·59
1502	94 Aquarii (2d) ...	6·5	1	·73	23 11 38·58	3·142	...	...	104 14	...
1503	B.A.C. 8122 ...	7·3	1	·77	23 12 45·32	2·180	...	...	17 5	...
1504	ε Cephei ...	4·7	1	·77	23 12 48·85	2·416	...	...	22 40	...
1505	B.A.C. 8126 ...	...	1	·83	23 13 2·29	+ 2·773	2	·79	42 23 48·4	19·64

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R. A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N. P. D.	Fraction of the Year for Mean of Observations.	Mean N. P. D. 1858, Jan. 1.	Pre- cession in N. P. D.
					h. m. s.	s.			° ' "	"
1506	B.Z. 324. 12...	7.7	1	.85	23 14 45.51	+ 2.976	1	.77	70 8 20.9	-19.67
1507	65 Pegasi .....	7.0	2	.80	23 15 36.33	2.977	1	.85	69 56 55.2	19.68
1508	B.A.C. 8147 ...	7.0?	...	...	23 15 41	...	2	.81	70 13 8.1	19.68
1509	B.A.C. 8156 ...	...	2	.80	23 16 49.01	2.916	1	.83	58 14 54.6	19.70
1510	v Pegasi .....	...	...	...	23 18 18	...	1	.86	67 22 36.3	19.73
1511	B.Z. 378. 138.	9.0	...	...	23 18 20.1	...	2	.76	58 18 37.1	19.73
1512	κ Piscium .....	5.0	2	.81	23 19 39.14	3.075	...	...	89 31	...
1513	B.A.C. 8184 ...	7.1	2	.80	23 22 11.51	3.091	...	...	95 18	...
1514	B.A.C. 8193 ...	...	...	...	23 24 11	...	1	.72	94 51 49.2	19.82
1515	Radcliffe 6099.	6.7	3	.27	23 24 11.57	+ 0.351	...	...	4 23	...
1516	14 Andromedæ	6.0	...	...	23 24 19	...	2	.80	51 32 37.2	19.82
1517	Radcliffe 6108.	7.9	...	...	23 25 50	...	4	.82	4 46 26.5	19.83
1518	Radcliffe 6117.	7.4	...	...	23 27 14	...	3	.79	4 13 32.3	19.85
1519	Groom. 4101...	5.7	3	.79	23 27 49.98	- 0.008	1	.86	3 28 34.0	19.86
1520	16 Piscium ...	5.7	...	...	23 29 9	...	1	.72	88 41 8.8	19.87
1521	Radcliffe 6129.	7.5	1	.30	23 29 46.67	+ 0.892	...	...	4 36	...
1522	B.A.C. 8221 ...	6.5	3	.78	23 30 17.67	3.113	...	...	103 51	...
1523	74 Pegasi .....	6.8	3	.87	23 30 28.35	3.022	2	.86	73 57 36.3	19.88
1524	ι Piscium .....	...	...	...	23 32 39	...	1	.89	85 8 35.1	19.46
1525	B.A.C. 8239 ...	6.5	1	.74	23 33 47.63	3.104	1	.85	102 28 7.1	19.92
1526	ω <sup>3</sup> Aquarii ...	5.0	...	...	23 35 21	...	3	.77	105 19 48.8	19.94
1527	Oelt. Arg. 25960	7.7	1	.85	23 36 29.97	2.858	1	.77	32 43 35.9	19.95
1528	78 Pegasi .....	...	1	.83	23 36 51.34	2.997	...	...	61 25	...
1529	Radcliffe 6172.	8.1	...	...	23 38 14	...	3	.80	5 19 8.0	19.97
1530	19 Piscium ...	...	...	...	23 39 8	...	2	.79	87 18 2.8	19.97
1531	R.H.C. 3653 ...	9.7	...	...	23 39 47	...	1	.88	5 27 50.6	19.98
1532	δ Sculptoris ...	...	2	.84	23 41 31.38	3.134	2	.89	118 55 14.4	19.92
1533	21 Piscium ...	...	1	.86	23 42 11.18	3.070	1	.86	89 42 43.3	19.99
1534	B.A.C. 8288 ...	...	...	...	23 43 14	...	1	.85	105 11 24.5	20.00
1535	Groom. 4154...	6.7	3	.86	23 45 31.58	2.762	3	.77	15 14 53.1	20.02
1536	B.A.C. 8321 ...	6.8	3	.85	23 49 52.29	2.626	1	.83	7 35 57.3	20.03
1537	ι Ceti .....	6.7	...	...	23 51 3	...	3	.83	106 38 16.4	20.04
1538	ω Piscium .....	...	...	...	23 52 1	...	1	.77	83 55 23.7	19.92
1539	B.A.C. 8333 ...	7.1	1	.76	23 52 23.43	3.076	2	.82	96 40 53.7	20.04
1540	Groom. 4193...	7.2	4	.57	23 52 57.48	+ 2.495	1	.89	4 5 5.0	-20.05

1515, 1517, 1521, 1529. Identical with R.H.C. 3608, 3615, 3626, and 3647, respectively.



254 *Catalogue of Concluded Mean R.A.'s and Mean N.P.D.'s*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean of Observations.	Mean R.A. 1858, Jan. 1.	Pre- cession in R. A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean of Observations.	Mean N.P.D. 1858, Jan. 1.	Pre- cession in N. P. D.
					h. m. s.	s.			° ' "	"
1541	B.A.C. 8338 ...	7.0	1	.77	23 53 30.68	+ 3.001	2	.85	28 36 46.4	- 20.05
1542	30 Piscium ...	4.7	3	.78	23 54 40.68	3.075	...	...	96 48	...
1543	85 Pegasi .....	6.5	...	...	23 54 45	...	1	.77	63 40 12.6	20.05
1544	33 Piscium ...	...	1	.76	23 58 4.01	3.072	...	...	96 30	...
1545	Radcliffe 6314.	8.7	1	.85	23 59 47.88	+ 3.048	2	.80	4 0 10.2	- 20.06

1545. Identical with R.H.C. 3714.

*Star omitted in its proper place.*

546*	B.A.C. 2526 ...	7.0	...	...	7 32 34	...	2	.20	84 26 45.1	+ 7.88
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# OBSERVED RIGHT ASCENSIONS AND NORTH POLAR DISTANCES OF THE MOON'S CENTRE

(CORRECTED FOR THE DIFFERENCE BETWEEN DIRECT AND REFLEXION OBSERVATIONS);

COMPARED WITH THE NAUTICAL ALMANAC.

Oxford Mean Solar Time of Transit of Centre.				Limb observed in R.A.	Observed App. R.A. of Moon's Centre.	Seconds of N.A.	Diff. N.A.—Obs.	Limb observed in N.P.D.	Observed N.P.D. of Moon's Centre.	Seconds of N.A.	Diff. N.A.—Obs.
1848. d. h. m. s.					h. m. s.	s.	s.		° ' "	"	"
Jan. 25	8	45	18.0	I	5 4 45.40	46.85	+ 1.45	S	61 58 48.5	52.0	+ 3.5
26	9	50	45.0	I	6 14 19.67	20.63	+ 0.96	N	61 35 59.0	61.3	+ 2.3
27	10	55	19.7	I	7 23 1.54	2.82	+ 1.28	N	63 24 35.0	35.8	+ 0.8
28	11	56	4.2	I & II	8 27 52.55	53.87	+ 1.32	N	67 8 33.9	38.2	+ 4.3
Feb. 22	7	39	6.0	I	5 48 46.11	46.97	+ 0.86	N	61 22 30.1	31.4	+ 1.3
24	9	42	46.5	I	8 0 40.04	41.35	+ 1.31	N	65 16 38.7	44.5	+ 5.8
25	10	39	2.9	I	9 1 2.21	3.20	+ 0.99	N	69 47 8.1	15.9	+ 7.8
27	12	18	24.6	I & II	10 48 33.28	33.97	+ 0.69	...	.....	...	...
Mar. 23	7	36	15.1	I	7 40 14.80	15.77	+ 0.97	N	64 8 35.7	38.8	+ 3.1
24	8	32	39.8	I	8 40 45.32	46.71	+ 1.39	N	68 5 5.3	11.5	+ 6.2
26	10	12	23.9	I	10 28 38.93	39.61	+ 0.68	N	79 10 17.6	24.6	+ 7.0
29	12	23	16.1	I & II	12 51 42.19	42.40	+ 0.21	S	98 9 24.7	27.5	+ 2.8
April 23	8	55	21.9	I	11 1 47.70	48.46	+ 0.76	N	83 29 39.2	45.4	+ 6.2
24	9	38	17.9	I	11 48 47.38	47.90	+ 0.52	N	89 47 37.7	44.3	+ 6.6
May 25	10	29	9.6	I	14 42 0.63	1.04	+ 0.41	N	110 17 20.6	18.6	— 2.0
27	12	5	16.9	I & II	16 26 16.87	17.18	+ 0.31	S	116 45 1.6	0.4	— 1.2
June 22	9	13	21.7	I	15 16 23.91	24.28	+ 0.37	N	113 5 34.1	37.5	+ 3.4
23	10	1	44.6	I	16 8 51.32	51.82	+ 0.50	N	116 5 18.4	13.4	— 5.0
24	10	52	8.0	I	17 3 19.62	19.73	+ 0.11	S	117 50 18.2	19.0	+ 0.8
25	11	43	35.5	I & II	17 58 52.14	52.24	+ 0.10	S	118 13 20.7	18.2	— 2.5
Aug. 19	8	23	57.8	I	18 15 32.31	32.44	+ 0.13	S	118 11 51.9	46.5	— 5.4
20	9	15	0.5	I	19 10 39.88	40.05	+ 0.17	S	116 42 6.1	1.1	— 5.0
23	11	37	22.6	I	21 45 15.10	15.16	+ 0.06	S	104 59 42.4	40.6	— 1.8
Sept. 17	7	56	58.4	...	.....	...	...	S	115 10 19.4	17.6	— 1.8
18	8	45	5.1	I	20 34 59.67	59.42	— 0.25	S	111 39 53.7	51.9	— 1.8
22	11	43	10.0	I & II	23 49 19.99	20.22	+ 0.23	N	89 16 22.6	18.5	— 4.1
Oct. 20	10	19	29.9	I	0 15 49.74	49.67	— 0.07	S	85 41 24.5	19.0	— 5.5
Nov. 17	8	54	11.1	I	0 40 40.41	40.57	+ 0.16	S	82 18 44.7	38.0	— 6.7
18	9	42	32.4	I	1 33 6.26	6.36	+ 0.10	S	76 2 27.1	23.1	— 4.0
Dec. 18	10	14	35.2	I	4 3 31.08	32.31	+ 1.23	N	64 5 33.1	28.1	— 5.0



**RESULTS**  
**OF**  
**METEOROLOGICAL OBSERVATIONS**  
**MADE IN THE YEAR**  
**1858,**  
**AT THE RADCLIFFE OBSERVATORY,**  
**OXFORD.**



## INTRODUCTION.

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THE Observations were made by Mr. George Green, the Assistant charged with all duties relating to the Meteorological department of the Observatory, as in former years. Mr. Green takes the general management of the Meteoro-Photographic Instruments, prepares the Photographic Paper, and makes such Observations with the ordinary Meteorological Instruments as are necessary for verifying or correcting the assumed Zeros of the Photographic Instruments. Mr. Green is also charged generally with the reduction of the Observations, but the greater portion of the discussions relating to diurnal inequalities of Meteorological elements has been performed by myself.

### *Ordinary Instruments.*

There has been no change whatever in the Instruments since the year 1857, and the account given of them for that year by Mr. Johnson may be sufficient. It is desirable however in this place to give a more distinct account of all that were in use in 1858, referring to former volumes for detailed descriptions and statements.

The ordinary Meteorological Instruments which were used in 1858 are the following:

1. A *Barometer* by Newman, placed in the N. E. corner of the Circle Room, with its cistern at an elevation of  $2\frac{1}{2}$  feet above the floor. The tube of this Barometer is 0.528 inches in diameter. The Zero of the graduated scale is marked by the apex of an inverted ivory cone, to which the surface of the mercury in the reservoir is adjusted before reading: the Vernier will read to .002 of an inch. The correction for capillarity is  $+ 0^{\text{in}}.003$ .

The old Barometer by Bird, used till 1838, is in the old Quadrant Room.

2. A *Dry Bulb Thermometer* by Negretti and Zambra, used as the standard, N<sup>o</sup>. 230.

3. A *Wet Bulb Thermometer* by ditto, N<sup>o</sup>. 230.

4. A *Dry Maximum* and a *Dry Minimum Thermometer* by ditto, N<sup>os</sup>. 1056 and 652.

#### [4] *Meteorological Observations made in the Year 1858,*

5. A *Wet Bulb Maximum* and a *Wet Bulb Minimum Thermometer*, by the same makers, Nos. 1055 and 740.

All these Instruments were compared by Mr. Glaisher with his standard, previously to their being sent to Oxford, and their corrections were found to be so small that they have been neglected.

These Thermometers are all placed on one frame, about four feet from the ground, within a Penthouse situated to the North of the Observatory, outside the Circle Room, and at a distance of about six feet from the wall. The Penthouse is so constructed of open work as to allow a perfectly free passage of air, and at the same time to afford a good protection to the Instruments from storms and rain.

6. A *Sky-radiation Thermometer*, placed on the ground near the frame carrying the other Thermometers.

7. A *Solar-radiation Thermometer*, with blackened bulb, placed in a niche in the South Wall of the West Wing of the Observatory, outside the Transit Room.

In connexion with the Barometer it may be mentioned, that the height of the Cistern above the mean level of the sea has been for some years assumed by Mr. Johnson to be 210 feet, by comparison of the mean yearly pressures with that given by Kaemtz as the pressure at the mean level of the sea, namely,  $29^{\text{in}}\cdot975$  for latitudes near the Oxford parallel. In 1847, however, Mr. Johnson gives 250 feet as the result of this comparison. The height of 210 feet is assumed in the reductions of 1858.

8. Two *Rain-gauges*; one placed on a slab of stone on a level with the ground on the South side of the Observatory, and at some little distance from it; and the other on the leads above the East Wing of the Observatory, at an elevation of 22 feet. The latter communicates with a tube leading to a receiving vessel in the North Window of the old Quadrant Room. The rain is poured into a glass graduated vessel of one inch diameter, for the purpose of being measured. A little evaporation may take place in the gauge on the ground, but, as the rain is measured every day, no sensible loss is experienced.

#### *Photographic Instruments.*

In these there has been no change since the year 1857, except in the position of the Anemograph.

They consist of the following :

1. A *Barograph*, placed in a small North Room between the Transit Room and the Circle Room, for a description of which, together with an account of the method of deducing the value of the scale, &c., &c.,

the Volumes for 1854 and 1855 of the Radcliffe Observations may be consulted.

The following Table gives the results of the comparison of the mean values of the Register for 22<sup>h</sup> in each month, with the mean readings of the Barometer at the same hour, corrected for capillarity and reduced to 32°.

Month, 1858.	Barometer at 22 <sup>h</sup> .	Barograph at 22 <sup>h</sup> .	Excess of Barograph.
	Inches.	Inches.	Inches.
January .....	30'115	30'116	+ 0'001
February .....	29'792	29'793	+ 0'001
March .....	29'739	29'751	+ 0'012
April .....	29'733	29'726	— 0'007
May .....	29'755	29'751	— 0'004
June .....	29'882	29'878	— 0'004
July .....	29'754	29'745	— 0'009
August .....	29'784	29'773	— 0'011
September ...	29'827	29'823	— 0'004
October .....	29'815	29'810	— 0'005
November ...	29'702	29'696	— 0'006
December ...	29'745	29'744	— 0'001
Mean .....	29'803	29'800	— 0'003

2. A *Thermograph*, for observing the temperature of the air.

3. A *Hygograph*, for observing the temperature of evaporation.

The Thermograph and Hygograph are placed side by side on the same metal frame, and the case which holds the Camera and the whole apparatus is placed very near that containing the other Thermometers, at a distance of about 8 feet from the North Wall of the West Wing of the Observatory. For a detailed description of these Instruments the same Volumes for 1854 and 1855 may be consulted. For these and all the other Photographical Instruments gas is employed.

The comparisons of the Thermograph and Hygograph with the Dry and Wet Thermometers are given in the following Table.



[6] *Meteorological Observations made in the Year 1858,*

*Comparisons of Thermograph and Hygrograph with Standard Dry and Wet Bulb Thermometers.*

Month, 1858.	Thermo- graph. Mean of 10 <sup>h</sup> & 22 <sup>h</sup> .	Standard. Mean of 10 <sup>h</sup> & 22 <sup>h</sup> .	Excess of Thermo- graph.	Hygro- graph. Mean of 10 <sup>h</sup> & 22 <sup>h</sup> .	Standard. Mean of 10 <sup>h</sup> & 22 <sup>h</sup> .	Excess of Hygro- graph.
January .....	37'2	37'2	0'0	36'3	36'1	+ 0'2
February .....	34'4	34'4	0'0	34'0	33'7	+ 0'3
March .....	41'4	41'1	+ 0'3	39'3	39'4	- 0'1
April .....	46'6	46'6	0'0	43'4	43'7	- 0'3
May .....	52'2	51'9	+ 0'3	48'9	48'6	+ 0'3
June .....	62'6	62'9	- 0'3	57'7	58'1	- 0'4
July .....	59'9	59'8	+ 0'1	54'2	55'3	- 1'1
August .....	60'6	60'5	+ 0'1	56'3	56'3	0'0
September ...	59'1	59'3	- 0'2	56'6	56'6	0'0
October .....	50'0	49'7	+ 0'3	47'9	47'7	+ 0'2
November ...	39'3	39'0	+ 0'3	37'7	37'3	+ 0'4
December ...	40'8	40'3	+ 0'5	39'5	39'2	+ 0'3
Mean .....	48'7	48'6	+ 0'1	46'0	46'0	0'0

4. A *Self-registering Anemograph*, for shewing continuously the velocity and direction of the Wind. A full description of this Instrument, accompanied by engravings, is given in Vol. xvii. (for 1856) of the Radcliffe Observations. It was originally mounted on a small building on the North side of the Observatory, (but at a considerable distance from it,) at a height of 22 feet from the ground, and there was placed side by side with it, for comparison, a small portable Anemometer on Dr. Robinson's principle, designed by Professor C.P. Smyth. Near the end of the year 1857 a small building was erected on the top of the tower, at an elevation of 110 feet above the ground, and, by placing there another of Professor Smyth's Instruments, and comparing its indications with those of the one below, Mr. Johnson found that, on the average, throughout the year 1858, the velocity at the top of the tower was greater than that at the lower station, in the proportion of 2'26 : 1. (*Rad. Obs.* vol. xviii. p. [xxiii.]) The Anemograph was however kept in its old position till August 9, when it was taken down, and, after some alterations had been made by Mr. Adie of the Strand, it was placed in its present position on the top of the tower. From some considerations based on the friction of the turning parts of the Instru-

ment, Mr. Johnson seems to have been induced to adopt a graduated scale for the reduction of the Photographic indications into velocities, during the time that the Instrument was in its lower position.

For reading off the Photographic Pictures, the unit of the scale employed is  $\frac{1}{4}$  of an English inch, and in one revolution of the third wheel employed for giving motion to the index, the space travelled through by the index is about 3.3 inches, or 13.2 units of the scale, which is nearly the breadth of the Photographic Paper. Mr. Johnson had estimated that one unit of this scale was, on the average, equivalent to about 8 miles of velocity of wind, but instead of using this uniformly he employed a Table, of which the following is an abstract :

0.1	divisions of scale	=	1	miles.
0.5	"	=	4 $\frac{1}{2}$	"
1.0	"	=	8	"
1.5	"	=	12	"
2.0	"	=	16	"
2.5	"	=	19	"
3.0	"	=	23	"
3.5	"	=	26	"
4.0	"	=	29 $\frac{1}{2}$	"
4.5	"	=	32	"
5.0	"	=	35	"
5.5	"	=	38 $\frac{1}{2}$	"
6.0	"	=	42	"

and this Table was used in the reduction of all the Observations made at the lower station, that is, till August 9. After this time, or on the removal of the Anemograph to the top of the tower, one division of the scale has been assumed to represent 12 miles of velocity.

Since, however, by the introduction of the two Smyth-Robinson Anemometers, (the one placed at the lower station and the other at the higher station,) the whole quantity of air in motion for a given period can be compared at these two elevations; and since they have been separately compared with the Anemograph, first in the lower position, and afterwards at the top of the tower, we have excellent means for determining whether the scales of velocities corresponding to the Registers of the three Instruments have been determined so as to give consistent results. The following Table gives the results of this comparison :

[8] *Meteorological Observations made in the Year 1858,*

*Comparison of the Velocities of the Wind as measured by the Two Small Anemometers and with the Anemograph, according to assumed Values of the Scales of the Instruments.*

Month, 1858.	Name of Anemo- meter.	Where placed.	Distance Travelled.	Name of Anemo- meter.	Where placed.	Distance Travelled.	Name of Anemo- meter.	Where placed.	Distances Travelled.
			Miles.			Miles.			Miles.
January ...	Smyth-Robinson (1).	At 22 feet elevation.	2913	Smyth-Robinson (2).	At 110 feet elevation, or on the top of the Tower.	7079	Anemograph.	At 22 feet elevation.	3134
February ...			3166			6660			3393
March .....			3771			7674			3869
April .....			3740			7825			4152
May .....			3805			8881			4021
June .....			2461			5442			2196
July .....			3092			6789			3011
August ...			2744			6400		On the top of the Tower.	7502
September.			2740			6571			
October ...			3044			6460			
November .			3066			6906			
December .			3379			8595			8104
For the Year			37921			85282			

Hence the ratio of the distances travelled by the cups of the Smyth-Robinson Anemometers at the lower and upper stations is 1 : 2.25, which is very nearly that given by Mr. Johnson in the volume for 1857, page [xxiii.]

Again, comparing the sums of distances travelled by the cups of Smyth-Robinson (1) and Anemograph at the lower station for the months January to July inclusive, we find them to be, for the former, 22948 miles, and, for the latter, 23776 miles, or in the ratio of 1.036 : 1 : and, taking the distances travelled by Smyth-Robinson (2) and Anemograph, at the upper station, or on the top of the tower, for October, November, and December, we find them to be, 21961 miles and 20926, or in the ratio of 1 : 0.953. Hence the ratio is nearly that of equality; or the scales of the different Instruments for reduction to miles have been well assumed, so as to give velocities on the same scale.

The method used by Mr. Johnson for determining the unit of the scale of velocities for the Anemograph is described in Vol. xvii. p. [xxi.] For the smaller Anemometers with Smyth's modifications, Robinson's theory has been used. These Instruments are of precisely the same size and construction. The distance between the centres of the cups is exactly 12 inches; and the distance travelled by the cups is

measured by a train of wheels, working in each other, of which the velocity of each is 10 times as great as that of the succeeding, the circumference of each being divided into ten equal parts, and marked as the dial of a clock. The first wheel is set in motion by an endless screw near the lower end of the spindle turned by the cups, and is moved through a unit or tenth part of a whole revolution in ten revolutions of the cups. Hence the space moved through by the cups corresponding to a unit of counting of the first wheel is  $10 \times 3^{\text{h}}.14159$ , and the space travelled by the air is three times this amount, or  $94^{\text{h}}.2477$ . Hence the number of units of the first wheel which correspond to a mile of air-motion will be  $\frac{5280}{94.2477} = 56$ , very nearly; and, for reduction to miles, the readings of the Instruments have been divided by this number.

The indications of the Smyth-Robinson Anemometers were read daily at 10<sup>h</sup> A.M. throughout the year.

There is also on the tower an *Hyetograph*, or *Self-registering Pluviometer*, (described in Vol. xvii. p. [xviii.]); but its action was found to be imperfect, and no continuous records of it exist.

The last Instrument to be mentioned is an *Electrograph*, erected by Mr. Adie, consisting chiefly of a long copper rod, terminating in a sharp spike and pointing upwards above the tower, and giving its indications photographically by connexion with a straw *Electrometer*. This Instrument has been partially successful, but its records are not continuous.

### *Daily Results of Meteorological Observations.*

The Tables under this title are intended to give as complete a summary of the mean daily elements of the weather as the size of the page will allow.

The indications of the Barometer and Thermometers, in the 2nd, 3rd, and 4th columns of the Table, are the means of the 12 daily readings of the Meteorographic Registers, and represent the means of the two-hourly indications, from noon of one day to noon of the next. When the Registers are imperfect, the means of the recorded readings are reduced to the mean for the day, by the application of the corrections for the horary changes which are given in Vol. xviii, as deduced from three years' observations.

The highest and lowest temperatures in the shade, in the sun, and on grass, were observed with the Self-registering Instruments by Negretti and Zambra previously mentioned. The corrections due to

[10] *Meteorological Observations made in the Year 1858,*

the want of coincidence of their readings with the Standard have been applied to their readings.

The record of rain is that given by the Gauge on the ground, which is examined every day at 10<sup>h</sup> A.M.

The amounts of the horizontal motion of the wind are deduced from the Observations made with the small Anemometer of Professor Smyth's construction on the top of the tower, according to the scale explained at page [7]. The directions of the wind are deduced from the twelve daily readings of the Anemograph, and therefore, from the commencement of the year till the removal of this Instrument to the top of the tower in August, the positions for measuring velocity and direction are not identical, but there is no reason to suppose that any difference exists in the directions at the two stations. The mean directions are deduced from the simple arithmetical means of the ordinates measured on the Photograph, and are afterwards converted into the corresponding points of the Compass. At times when the Anemograph has failed, the estimation of direction is the mean of the three estimations made by the eye during the day.

The amount of cloud is estimated as usual from 0 to 10; 0 representing a cloudless sky, and 10 a perfectly overcast sky. In cases of a double description, the first applies from noon to midnight: the second from midnight to noon.

The principal elements for determining the general character of the weather for each month, together with remarkable meteoric phenomena, are given at the end of the Daily Results. The phases of the Moon are given at the foot of each page.

*Diurnal Inequalities of Mean Monthly Meteorological Elements, derived from the Two-hourly Indications of the Photographic Instruments, 1858.*

These results are precisely similar to those given in 1857, excepting that as, for economy of printing, the actual Meteorographic Registers of Bi-hourly Results are not given in this volume, it was necessary to give for the Barometer and the Dry and Wet Thermometers the Mean Monthly Indications for every Two Hours. These results form Tables I, IV, and VII.

Tables II, V, VIII, &c., give the constants arising from the solution of Bessel's Interpolation Equations, for expressing in the usual periodical formulæ the height of the Barometers, Thermometers, &c., at any hour of the day, reckoned from noon, in terms of the mean height

and the hour of the day. In the case of twelve values of a function observed at equal intervals of time, the solution is the following :

If  $B_s = B + a \sin(x + A) + b \sin(2x + B) + c \sin(3x + C) + \&c.$ , (where  $x$  is the hour expressed in degrees,) and if 0, i, ii, iii, ..... x, xi, represent the values of the function corresponding to values of  $x$ ,  $0^\circ$ ,  $30^\circ$ ,  $60^\circ$ , .....  $300^\circ$ ,  $330^\circ$ , then we shall find that the application of the method of least squares leads to the following determination of the values of the constants  $a, A, b, B, c, C, \&c.$  :

$$B = \frac{1}{12}(0 + i + ii + \dots + x + xi),$$

$$6a \sin A = 0 - vi + (i - v + xi - vii) \sin 60^\circ + (ii - iv + x - viii) \sin 30^\circ,$$

$$6a \cos A = iii - ix + (ii - x + iv - viii) \sin 60^\circ + (i - xi + v - vii) \sin 30^\circ,$$

$$6b \sin B = 0 - iii + vi - ix + (i - ii + v - iv + vii - viii + xi - x) \sin 30^\circ,$$

$$6b \cos B = (i - iv + ii - v + vii - x + viii - xi) \sin 60^\circ,$$

$$6c \sin C = 0 - ii + iv - vi + viii - x,$$

$$6c \cos C = i - iii + v - vii + ix - xi.$$

The values of the constants being thus obtained for the barographic, thermographic, and hygrographic results, Tables III, VI, and IX, are formed by means of them, by substituting for  $x$  in the general formula the hourly values, namely,  $0^\circ$ ,  $15^\circ$ ,  $30^\circ$ , .....  $330^\circ$ ,  $345^\circ$ , and thus the hourly values of the diurnal inequalities, or the excesses of the hourly values above the means for the day, are obtained.

Table X, giving the *Mean-Monthly Elasticity of Vapour for every Two Hours of the Day*, is deduced by means of Mr. Glaisher's Tables from the two-hourly values of the temperature of the air and the temperature of evaporation, and the mean values of these quantities for the year are formulized as in the preceding instances. Table XI, giving the *Mean-Monthly Values of the Pressure of Dry Air for every Two Hours*, is derived from Table X, by subtracting the numbers in that Table from the corresponding numbers in Table I.

### *Results for the Direction and Velocity of the Wind.*

Table XII is formed in the following manner :

Suppose the wind to have blown during the month with a uniform velocity, represented in its statical effects by  $v$ , in various directions estimated to single points of the Compass or to  $11^\circ\frac{1}{2}$ , (as they are recorded in the Meteorological Register for every two hours for each day of every month;) and let the frequency with which it has blown from any one direction making an angle  $\alpha$  with the Meridian towards the North at any hour, be denoted by  $n$ . Then  $nv$  may be considered

[12] *Meteorological Observations made in the Year 1858,*

to be the whole force of this wind during the month, and may be resolved into its components  $nv \cos a$  and  $nv \sin a$  in the direction of the Meridian and at right angles to it, being considered positive towards the North and East. The sums of the forces of all the winds for the month at this particular hour, resolved in the directions of the cardinal points will be, therefore,  $v \Sigma (n \cos a)$  and  $v \Sigma (n \sin a)$ ; and, if we suppose that these are the components of a single force  $R$ , making an angle  $\theta$  with the Meridian, which would produce the same effect if all were blowing at the same instant of time, we shall have

$$\begin{aligned} R \cos \theta &= v \Sigma (n \cos a) = vA, \text{ suppose,} \\ \text{and } R \sin \theta &= v \Sigma (n \sin a) = vB, \quad ,, \end{aligned}$$

and therefore  $\tan \theta = \frac{B}{A}$ , and  $R = v \sqrt{A^2 + B^2}$ ; and the mean representative of the velocity of the wind at any hour will be  $\frac{v \sqrt{A^2 + B^2}}{\Sigma n}$ , blowing in the direction  $\theta$ . Supposing  $v$  to be the unit of velocity, then  $\frac{\sqrt{A^2 + B^2}}{\Sigma n}$  will represent the mean velocity referred to this unit, and the numbers in Table XIII are thus formed, while the values of  $\theta$  are given in Table XII.

It will be readily seen that the numbers in Table XII give a measure of the relative steadiness of the wind and of its general proximity to the directions given in the preceding Table. When the numbers approach unity, as in the months February, July, November, and December, the wind has been far less variable than in the months January, April, June, and October, for which the numbers are relatively very small; and an inspection of the mean daily results will shew that this is the case. The supposition, however, of a uniform velocity during the month is a very arbitrary one, and the results can be considered to be only approximately correct; but it has been shewn by Coffin, in his work "*On the Winds of the Northern Hemisphere*," that the errors thus entailed are not very great, and I have therefore allowed the computations to be performed in the same way in which they were performed by Mr. Johnson for former years. In following years the velocities will be taken into account\*.

It has been previously mentioned (page [6]) that the Anemograph was transferred to a new station at the top of the tower in August 1858, and it is therefore necessary to divide Table XIV into two parts,

\* On this subject, see Schmid's *Lehrbuch der Meteorologie*, forming vol. xxi. of Karsten's *Allgemeine Encyclopädie der Physik*.

and to treat the results obtained before August, and those that follow, quite separately, especially as a new value of the scale has been used after the removal of the Anemograph to the tower.

The Equations for relative velocities are preferable to those giving absolute velocities, as the value of the scale of velocities seems still uncertain.

Table XV gives the *General Changes of the Wind* for the year, and it has been formed with great facility from the two-hourly registers of direction on the Anemographic sheets, by noting the times when conspicuous changes have occurred from direct to retrograde, or the contrary, and then finding what have been the whole changes during those intervals of time in which the wind has been turning on the whole in one direction, retrograde or direct. The Table gives the monthly amounts of changes in both directions, and, as usual, the yearly amount of direct motion considerably exceeds that of retrograde motion.

Table XVI, giving the relations of Pressure and Temperature of the Air under different Winds, is formed precisely in the same manner as in the year 1857, excepting that, for the purpose of economizing space, the elements of pressure and temperature have been collected in the same Table. Thus, all the elements being taken from the "Daily Results of Observations," they have been grouped so as to reduce the whole number of directions to eight, by combining the number of days under the principal point with those under the points immediately preceding and following, allotting to each a weight proportional to the number of observations. Under the North point are included therefore the Barometer and Thermometer Readings, corresponding to North, N.N.W., and N.N.E., and so on for all the rest. The separate columns of the Table require little explanation, excepting that the numbers in Column 6 are taken from the first Table on p. [xxvii.] of the volume for 1857, and those in Column 8 from the Table on p. [83.] of the same volume, by subtracting the Normal Temperatures given in that Table from  $48^{\circ}6$ , the normal mean annual temperature.

Table XVII gives the amount of Rain collected in the two Gauges, one placed on the ground South of the Observatory, and the other at an elevation of 22 feet on the leads of the East Wing of the Observatory, immediately above the Quadrant Room. (See p. [4]). The ratio of the quantities collected at the two stations, namely 1.181, agrees pretty closely with the result for five years given in the volume for 1857, p. [xxx.], namely 1.155.

Table XVIII, which gives the relations of the Quantities of Rain which fell during the year 1858 under different winds, has been formed



[14] *Meteorological Observations made in the Year 1858.*

on precisely the same principles as those applied in Table XVI, namely, by forming groups for each principal point, including the half-points immediately preceding and following, and taking the corresponding quantities of rain-fall from the "Daily Results." The observations of a single year necessarily give a very imperfect result, but the combination of several years will give results of considerable importance, so as to make it desirable to continue the calculations from year to year.

Table XIX, which gives the readings of two Thermometers during the Solar Eclipse of March 14-15, needs no explanation. The sky was generally cloudy, so that the effect of the eclipse is very small on the temperature and radiation, except near the commencement.

**DAILY RESULTS**  
**OF**  
**METEOROLOGICAL OBSERVATIONS**  
**MADE AT THE**  
**RADCLIFFE OBSERVATORY, OXFORD,**  
**IN THE YEAR**  
**1858.**



## JANUARY, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Rain.	Wind.		Amount of Cloud.	Weather.
				Shade.		Sun.			Direction.	Hourly Motion.		
		Air.	Evap.	Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	30.270	35.7	35.7	44.3	26.5	63.5	28.0	...	SW	133	4	Fair.
2	30.246	39.3	38.3	42.0	31.0	47.0	31.0	...	N	105	10	Foggy.
3	30.308	35.1	33.9	41.1	30.4	43.6	29.0	...	ESE	116	3	Fair.
4	30.220	28.3	27.4	34.5	25.0	45.6	24.0	...	E	221	1	Fine.
5	30.011	27.7	27.7	28.0	26.0	29.5	25.0	...	NE	287	10	Overcast.
6	30.070	30.3	30.3	33.0	27.0	31.0	24.5	...	SSE	178	10	Cloudy.
7	29.956	40.0	39.1	49.0	32.0	50.5	28.0	0.10	SSW	161	5	Dull.
8	29.915	50.7	48.6	53.0	48.0	54.0	42.0	...	WSW	322	10	Dull & damp.
9	30.007	43.6	41.2	50.5	37.0	55.0	33.0	0.08	SW	352	5	Fair.
10	29.910	49.7	48.0	52.0	45.5	58.0	40.0	0.05	WSW	340	3	Cloudy. Fall.
11	30.268	35.7	34.1	46.5	28.0	58.5	26.0	...	WNW	412	1	Fair.
12	30.193	41.9	40.8	44.0	31.0	61.0	28.5	0.01	WSW	251	2	Fair.
13	30.149	35.5	34.4	47.0	28.5	61.0	26.0	...	NW	291	1	Fair.
14	30.182	33.9	33.4	41.0	28.5	60.0	27.5	...	WSW	175	3	Variable. Fog.
15	30.180	42.4	41.6	46.0	32.0	46.0	29.0	0.02	WSW	205	10	Overcast.
16	30.416	37.9	36.4	47.5	31.5	49.0	30.0	...	NE	241	10	Cloudy.
17	30.363	35.0	33.9	38.5	31.5	56.0	28.0	...	NE	182	3	Fair.
18	30.232	40.0	39.1	46.5	36.0	58.0	32.0	...	WSW	180	6	Fair.
19	29.937	45.3	43.9	47.5	39.0	54.5	35.0	...	WSW	321	8	Variable.
20	29.867	39.3	35.4	48.5	33.5	56.0	28.5	...	WNW	700	3	Variable.
21	30.225	32.3	29.6	38.0	27.5	49.0	25.0	...	N	603	0	Fine.
22	30.355	33.1	31.8	39.0	28.0	54.0	25.0	...	N	159	3	Fair.
23	30.419	29.5	29.0	41.5	20.5	62.5	21.0	...	NW	102	3	Fair.
24	30.314	33.1	32.3	38.0	24.5	60.0	21.0	...	NW	201	3	Fair.
25	30.082	34.4	33.4	41.0	28.5	41.0	24.0	...	SSE	354	4	Fair.
26	29.855	32.3	32.2	35.5	30.0	43.0	25.0	...	SE	283	5	Fair.
27	29.970	36.2	35.8	42.0	31.5	56.0	26.0	...	SSE	220	5	Fair. Hazy.
28	30.068	41.4	41.2	46.0	34.0	60.5	28.0	...	S	231	7	Fair.
29	29.944	48.8	47.7	51.0	45.0	53.0	40.0	0.18	WSW	409	10	Overcast.
30	29.714	45.7	42.3	52.0	37.0	52.0	34.5	0.24	WNW	488	8	Stormy.
31	29.693	35.8	35.7	41.5	30.5	62.0	27.5	...	WNW	318	2	Fair.
Mean or Sum.	30.108	37.7	36.6	43.4	31.8	52.2	28.8	0.68	S 81° W	8541	5	

## MOON'S PHASES, &amp;c.

	d.	h.		d.	h.		d.	h.
Last Quarter.....	6.	13.	New .....	14.	18.	Perigee .....	26.	9.
Apogee .....	10.	8.	First Quarter ...	22.	5.	Full .....	28.	21.

FEBRUARY, 1858:

Day.	Mean Barom. Reduced to 32°.	Mean Tempera- ture.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
				Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
		Air.	Evap.	Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.730	30.0	29.9	35.0	25.5	47.0	25.0	...	NW	214	7	Snowing.
2	29.621	31.4	31.4	35.0	29.5	35.0	28.5	0.26	NW	153	10	Snowing.
3	29.412	45.3	45.1	49.5	34.5	49.5	29.5	0.48	SSW	394	10	Stormy.
4	29.591	40.9	40.9	47.0	35.0	55.0	31.0	0.07	SW	307	4	Clearing.
5	29.815	43.4	43.1	51.5	37.5	60.0	32.0	...	S	342	5	Fair.
6	29.833	39.7	39.5	47.2	33.0	58.0	32.0	...	SSE	268	7	Fair.
7	29.820	35.2	35.2	43.0	29.0	57.0	27.0	...	ESE	199	0	Fine.
8	29.871	32.6	32.6	39.0	27.5	51.0	24.0	...	E	218	3	Fine.
9	29.907	34.0	34.0	39.0	32.0	45.0	28.0	...	E	271	4	Hazy.
10	29.851	31.7	31.7	37.0	29.5	49.0	27.0	...	ENE	276	9	Dull after 4 <sup>h</sup> .
11	29.916	31.8	31.8	33.0	30.5	33.5	28.0	0.03	NE	128	10	Overcast.
12	30.033	37.8	37.8	39.5	32.5	39.0	30.0	0.06	NE	132	10	Drizzle.
13	29.859	39.7	39.6	42.0	37.0	42.0	34.0	0.43	NE	179	10	Rain after 5 <sup>h</sup> .
14	29.781	36.2	36.0	39.0	34.5	41.0	30.5	0.42	NE	314	10	Rain.
15	29.787	36.4	36.2	40.0	34.0	49.0	30.0	...	NNE	192	10	Heavy clouds.
16	29.910	35.7	35.3	43.5	29.0	57.5	27.0	...	N	141	4	Fair.
17	29.981	35.2	34.8	43.0	30.0	58.0	27.0	...	NE	171	6	Fair.
18	29.908	27.6	27.5	35.0	22.0	58.0	22.0	...	ENE	312	1	Fine.
19	29.761	32.6	32.5	38.0	27.5	58.0	24.0	...	E	199	3	Fair.
20	29.657	33.1	33.0	40.0	28.0	57.0	24.0	...	E	222	7	Fair.
21	29.701	35.1	35.0	40.0	29.0	48.0	26.0	...	E	225	3	Fair.
22	29.573	32.1	32.1	39.5	27.0	59.0	24.5	...	NE	326	4	Fair.
23	29.707	36.1	36.0	39.0	32.0	53.0	28.0	0.02	NE	208	7	Dull. Fall.
24	30.041	32.3	32.2	44.0	24.5	64.0	22.5	...	ENE	342	0	Fine.
25	30.046	29.7	29.6	37.5	24.0	57.5	21.0	...	NE	447	2	Fine.
26	29.820	31.1	31.1	36.0	27.0	55.0	24.0	...	ENE	400	6	Fair.
27	29.630	33.0	32.8	40.5	27.0	58.0	23.0	...	NE	412	7	Fair.
28	29.480	30.6	30.6	38.0	26.0	47.0	23.0	...	NE	422	7	Fair.
Mean or Sum.	29.787	34.6	34.6	40.4	29.8	51.5	26.9	1.77	N 56° E	7414	6	

MOON'S PHASES, &c.

	d.	h.		d.	h.		d.	h.
Last Quarter .....	5.	9.	New .....	13.	10.	Perigee .....	22.	8.
Apogee .....	7.	4.	First Quarter .....	20.	13.	Full .....	27.	10.

## MARCH, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Tempera- ture.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
				Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion		
		Air.	Evap.	Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.429	30.1	30.1	32.0	28.0	33.0	27.0	...	NE	591	10	Overcast.
2	29.480	30.1	30.1	32.0	27.5	32.0	26.0	...	NE	579	10	Windy.
3	29.618	30.5	30.5	34.0	26.5	50.0	26.0	...	NE	...	7	Cloudy.
4	29.353	34.8	34.8	40.0	30.5	64.0	26.0	0.07	SSE	...	8	Fair.
5	29.214	34.9	34.9	40.0	28.0	60.0	27.0	0.04	W	450	5	Stormy.
6	29.001	32.1	32.1	38.5	27.0	49.0	24.0	...	WNW	491	3	Fair.
7	28.999	36.3	36.2	41.0	31.0	51.5	27.0	0.05	WNW	472	7	Stormy.
8	29.361	30.1	29.6	39.0	24.5	52.0	22.0	...	WNW	396	5	Changeable.
9	29.558	34.4	33.5	40.5	28.5	53.0	25.0	...	W	392	3	Fair.
10	29.708	26.6	26.2	42.5	13.0	56.5	23.0	...	N	143	6	Snow showers.
11	29.937	30.1	29.4	37.5	22.0	61.6	20.5	0.10	NNW	155	4	Fair.
12	29.680	39.1	37.6	47.0	34.0	50.0	29.0	0.19	WSW	378	10	Dull. Raw cold.
13	29.268	44.6	42.2	51.6	37.0	59.0	31.0	0.03	W	400	10	Variable.
14	29.513	44.4	41.5	49.5	40.5	57.0	34.5	0.09	WNW	467	7	Stormy.
15	29.811	48.0	45.3	53.0	42.0	64.0	37.0	0.01	W	326	7	Showery.
16	29.977	49.7	46.5	57.5	44.0	75.5	39.5	...	WSW	341	10	Overcast.
17	30.059	46.9	44.1	56.0	39.0	71.0	35.5	...	NW	231	7	Fair.
18	30.049	47.0	44.2	53.0	42.0	73.5	38.0	...	WSW	202	10	Cloudy.
19	30.183	51.6	47.5	56.2	46.5	74.0	42.0	...	W	128	10	Overcast.
20	30.283	46.2	42.2	57.0	34.0	75.0	33.5	...	S	105	6	Fair.
21	30.345	45.7	41.9	59.0	32.5	86.0	31.0	...	NE	102	0	Fine.
22	30.357	45.4	42.0	59.5	32.0	86.5	31.0	...	ENE	92	0	Fine.
23	30.162	49.8	45.7	62.5	36.5	87.0	33.0	...	ESE	96	0	Fine. Hazy.
24	29.956	51.5	45.4	66.6	40.5	87.0	37.5	...	NNW	214	5	Fair.
25	30.084	39.2	35.4	48.0	29.0	66.5	28.5	...	ENE	187	6	Heavy clouds.
26	29.991	42.6	39.3	52.0	33.0	70.5	30.0	...	W	216	5	Fair.
27	29.973	47.9	44.4	53.0	43.0	69.0	39.0	...	NNW	148	10	Cloudy.
28	29.883	45.0	42.5	52.0	36.0	65.0	33.0	...	SSW	185	7	Damp.
29	29.635	47.1	42.8	57.0	36.0	75.0	32.5	...	SSW	228	4	Fair.
30	29.319	51.1	47.9	57.0	48.0	65.0	42.5	0.01	WSW	427	10	Stormy.
31	28.977	45.8	45.3	53.0	40.5	54.0	38.0	0.21	WSW	360	10	Stormy.
Mean or Sum.	29.715	41.3	39.1	49.0	34.0	63.6	31.3	0.80	N 65° W	8502	6	

## MOON'S PHASES, &amp;c.

	d.	h.		d.	h.		d.	h.
Apogee .....	7.	0.	New .....	15.	0.	First Quarter.....	21.	20.
Last Quarter .....	7.	6.	Perigee .....	19.	5.	Full .....	29.	0.

APRIL, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Tempera- ture.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
		Air.	Evap.	Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
				Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.645	34.0	31.2	44.0	25.0	55.0	27.0	...	NNE	218	7	Stormy.
2	29.422	41.0	39.6	53.5	35.4	59.0	33.0	0.17	S	360	10	Snow & rain.
3	29.522	49.4	46.8	57.0	42.0	70.5	38.0	0.09	W	507	7	Showery.
4	29.888	41.2	37.8	49.0	34.0	66.5	34.0	...	ENE	355	5	Clearing.
5	29.598	41.8	37.3	47.5	37.5	53.0	35.5	0.12	E	514	10	Damp.
6	29.669	40.2	38.3	42.0	38.0	44.0	38.0	0.54	E	259	10	Cold rain.
7	29.339	42.8	41.5	51.0	39.0	57.0	35.5	0.94	E	378	10	Wind & rain.
8	29.424	40.8	39.5	54.0	34.0	63.0	32.0	0.36	ENE	428	10	Showery.
9	29.613	38.3	35.6	44.0	32.5	45.0	30.0	...	ENE	477	9	Cloudy.
10	29.706	37.2	33.8	48.0	28.0	68.0	27.0	...	NE	308	2	Clearing.
11	29.741	41.7	37.7	51.3	34.0	71.5	31.5	...	NNE	221	7	Fair.
12	29.743	38.7	35.3	42.5	33.5	67.0	32.0	...	NNE	169	7	Fair.
13	29.885	40.8	36.8	48.0	33.0	69.5	29.5	...	SSE	130	6	Fair.
14	29.854	50.4	45.0	59.0	45.0	67.0	38.0	...	SSE	263	10	Overcast.
15	29.748	56.4	52.1	65.5	46.5	75.0	42.0	...	SW	308	4	Fair.
16	29.711	55.1	51.4	63.5	49.0	86.0	47.0	1.10	N	218	10	Showery.
17	29.968	46.6	44.6	54.0	37.0	65.0	37.0	0.01	NNE	100	7	Fair.
18	29.962	48.8	44.4	60.5	35.0	86.0	34.0	...	E	98	1	Fine.
19	29.859	52.2	45.5	63.0	39.5	87.0	37.0	...	ESE	110	4	Fair.
20	29.958	54.9	47.0	65.5	41.0	89.0	37.5	...	NNE	99	3	Hazy.
21	30.114	57.0	53.2	69.0	43.5	93.0	39.5	...	NE	40	3	Hazy.
22	30.158	56.7	52.9	71.0	42.5	89.5	40.0	...	E	160	0	Fine.
23	29.929	55.5	51.6	69.0	43.0	88.0	40.0	...	SE	248	1	Fair.
24	29.884	52.8	51.6	62.5	47.0	82.0	42.5	...	WSW	432	5	Variable.
25	29.863	50.0	48.2	59.0	43.0	83.0	41.0	0.03	NNE	191	6	Changeable.
26	29.854	48.5	45.2	59.5	40.5	82.0	40.0	...	NE	144	8	Fair.
27	29.889	47.5	45.4	52.5	43.0	73.0	40.0	...	NE	123	10	Fair.
28	29.646	48.7	46.7	55.5	44.0	70.0	43.0	0.10	S	137	10	Change.
29	29.122	48.0	45.0	56.5	42.0	71.0	39.5	0.05	WSW	421	7	Variable.
30	28.878	41.0	40.1	51.0	36.0	69.0	34.0	0.04	WSW	409	7	Showery.
Mean or Sum.	29.719	46.6	43.3	55.6	38.8	71.5	36.5	3.55	N 73° E	7825	7	

MOON'S PHASES, &c.

	d. h.		d. h.		d. h.
Apogee .....	3. 20.	New .....	13. 11.	First Quarter .....	20. 2.
Last Quarter .....	6. 2.	Perigee .....	15. 16.	Full .....	27. 15.

## MAY, 1858:

Day.	Mean Barom. Reduced to 32°.	Mean Temp- era- ture.		Self-Registering Ther- mometers.				Rain. /	Wind.		Amount of Cloud.	Weather.
		Air.	Evap.	Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
				Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.017	42.3	41.6	49.0	38.0	58.0	35.0	0.12	W N W	295	7	Showery.
2	29.259	43.8	41.8	51.0	38.0	64.5	37.0	0.06	N	194	6	Showery.
3	29.515	43.1	40.2	51.0	35.5	73.0	34.0	...	E N E	225	6	Fair.
4	29.767	43.8	41.8	53.0	34.0	66.0	33.0	0.09	E	142	10	Storms.
5	29.957	46.8	43.6	58.5	38.0	78.5	37.0	...	N N W	177	5	Variable.
6	30.177	45.0	40.8	56.5	34.5	80.0	34.5	...	E N E	155	3	Fair.
7	30.176	47.2	44.1	57.0	33.5	80.0	34.0	...	N E	154	4	Fair.
8	30.031	48.0	45.5	57.5	39.0	77.0	39.0	0.02	N E	225	7	Variable.
9	29.931	48.5	45.4	57.0	40.0	76.0	39.0	...	E	161	2	Fair.
10	29.859	47.8	45.8	61.5	42.5	83.0	41.0	...	N E	326	6	Fair.
11	29.696	51.2	47.3	60.5	37.0	84.0	38.0	...	N N E	195	6	Change.
12	29.546	48.4	46.6	55.0	36.0	63.0	37.0	0.01	E	169	8	Change.
13	29.524	50.6	50.6	60.5	36.0	78.5	41.0	0.23	W	210	7	Storm. Fair.
14	29.310	51.9	50.5	61.0	46.5	64.0	42.0	0.30	S	299	10	Showery.
15	29.232	52.9	50.8	60.0	47.0	69.0	44.0	0.02	W S W	439	5	Showery.
16	29.634	53.9	51.1	60.5	48.8	79.0	44.0	0.24	W S W	513	7	Fair. Rain.
17	29.709	55.6	54.5	59.0	53.5	60.0	49.0	0.23	W S W	463	10	Showery.
18	29.712	52.5	49.8	63.0	46.0	71.0	42.0	0.05	W S W	551	6	Showery.
19	29.808	51.5	49.8	61.0	43.0	79.0	40.5	...	W S W	408	4	Fair.
20	29.791	55.5	52.4	65.0	48.0	83.0	45.0	...	S S W	292	8	Fair. Dull.
21	29.567	56.3	52.9	66.0	48.0	70.0	44.5	...	W S W	385	9	Cloudy.
22	29.569	54.2	50.5	63.5	47.0	74.0	43.5	...	S W	418	6	Fair. Rain.
23	29.603	53.1	48.9	61.0	47.5	76.0	44.5	0.10	W S W	418	9	Fall. Fair.
24	29.451	49.5	47.0	57.0	45.0	65.0	42.0	0.80	E S E	423	10	Rain.
25	30.134	50.3	45.8	58.5	39.5	71.0	38.0	0.08	N	236	6	Showery.
26	30.145	54.4	50.3	65.0	47.5	82.0	44.0	...	W S W	269	8	Fair.
27	29.915	55.3	50.3	66.0	46.0	83.0	44.0	...	W	315	8	Fair.
28	29.943	55.1	49.6	63.0	45.0	83.0	43.0	...	W N W	185	7	Fair.
29	29.872	60.3	53.7	71.0	50.0	92.0	47.0	...	S W	198	7	Fair.
30	29.867	63.6	56.9	72.0	51.0	87.0	48.5	...	S S W	266	10	Fair.
31	29.824	67.8	62.3	79.0	57.9	92.0	47.0	...	S S W	185	4	Fair.
Mean or Sum.	29.727	51.6	48.5	60.6	43.2	75.5	41.0	2.35	S 76° W	8891	7	

## MOON'S PHASES, &amp;c.

	d. h.		d. h.		d. h.
Apogee .....	1. 12.	Perigee .....	13. 20.	Full.....	27. 6.
Last Quarter .....	5. 19.	First Quarter .....	19. 10.	Apogee .....	28. 20.
New .....	12. 20.				



JUNE, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Rain.	Wind.		Amount of Cloud.	Weather.
		Air.	Evap.	Shade.		Sun.	Grass.		Direction.	Hourly Motion.		
				Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.876	66.7	57.7	78.5	53.0	97.0	50.5	...	W	145	3	Fair.
2	29.763	67.4	56.1	80.0	58.5	92.5	54.5	0.33	S	230	8	Variable.
3	29.750	64.6	58.4	81.0	52.0	93.0	51.0	...	SW	234	7	Fair.
4	29.915	60.3	53.4	71.5	52.0	93.0	50.0	...	WSW	129	8	Fair.
5	29.900	61.6	54.7	71.0	52.5	86.0	50.5	...	NNW	147	7	Fair.
6	29.961	59.6	52.1	70.0	48.0	94.5	47.0	...	N	138	10	Fair. Aurora.
7	29.769	60.3	54.1	69.0	49.5	92.0	47.5	...	ENE	220	3	Fair. Hazy.
8	29.651	68.1	62.0	80.5	55.5	98.0	53.0	0.46	ENE	196	6	Variable.
9	29.732	67.0	61.8	80.0	56.5	100.0	54.0	...	SW	177	5	Fair.
10	29.820	65.9	60.8	74.0	56.5	85.5	55.0	...	NNE	130	9	Fair.
11	29.768	65.6	59.5	76.0	55.0	98.5	53.0	...	NE	90	3	Fair.
12	29.736	63.0	58.3	73.0	51.0	86.0	51.0	0.20	W	110	6	Showery.
13	29.691	67.0	60.0	77.5	57.5	89.0	54.5	...	SW	207	6	Fair.
14	29.731	69.9	61.1	82.0	54.5	93.0	54.0	...	SSW	172	3	Fair.
15	29.721	76.9	67.0	90.0	63.5	104.5	59.5	...	SE	196	3	Fair.
16	29.631	69.9	63.5	83.5	61.0	101.0	58.0	0.60	WNW	211	9	Variable.
17	29.719	57.5	52.2	65.0	50.0	76.5	50.0	...	WSW	189	9	Overcast.
18	29.871	60.6	54.4	70.0	49.0	85.0	50.0	...	NW	70	6	Fair.
19	29.933	63.5	57.0	74.0	54.0	92.0	53.0	...	SW	189	9	Fair. Dull.
20	30.017	61.7	57.8	69.0	53.0	88.0	53.0	...	SSW	68	7	Variable.
21	30.125	67.0	59.4	76.5	57.0	101.0	54.5	...	SSE	98	5	Fair.
22	30.151	68.7	61.4	78.0	58.5	97.0	55.0	...	NNW	174	5	Fair.
23	30.056	68.1	61.5	79.5	58.5	96.0	55.5	...	NW	197	6	Fair.
24	30.125	58.6	51.8	68.0	50.0	86.0	47.5	...	N	248	6	Fair.
25	29.992	62.2	55.0	71.5	52.5	85.0	50.0	...	WNW	239	3	Fair.
26	29.837	61.4	54.1	72.5	52.0	92.0	49.0	...	WNW	274	9	Fair.
27	29.933	54.9	47.6	66.0	44.0	81.0	44.0	...	NW	225	4	Fair.
28	29.888	59.2	53.3	70.0	50.0	85.0	48.0	...	W	284	5	Heavy clouds.
29	29.956	59.4	52.9	67.0	49.0	80.0	48.0	...	WNW	212	6	Fair.
30	29.916	59.0	51.4	71.0	46.5	86.0	46.0	...	NNE	243	5	Fair.
Mean or Sum.	29.864	63.8	57.0	74.5	53.3	91.0	51.5	1.59	N 76° W	5442	6	

MOON'S PHASES, &c.

	d.	h.		d.	h.		d.	h.
Last Quarter .....	4.	8.	Perigee .....	11.	6.	Apogee .....	24.	22.
New .....	11.	3.	First Quarter .....	17.	20.	Full .....	25.	31.

## JULY, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Tempera- ture.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
				Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
		Air.	Evap.	Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.860	55.3	48.4	63.5	49.5	75.0	44.0	...	W N W	342	7	Fair.
2	29.914	54.3	48.7	62.5	47.0	62.0	44.5	...	N N W	232	10	Overcast.
3	30.035	52.8	47.4	61.5	43.0	72.0	42.5	...	N N W	189	10	Overcast.
4	29.711	57.7	52.7	66.5	52.0	83.0	49.0	0.18	W S W	333	10	Showery.
5	29.533	56.7	51.4	63.0	52.0	79.5	49.5	0.01	W	229	9	Dull.
6	29.431	54.6	48.5	64.0	43.0	84.0	43.0	...	W N W	146	8	Fair.
7	29.478	56.2	50.6	65.0	50.0	78.0	47.5	0.03	N N W	123	9	Variable.
8	29.615	55.0	50.3	63.0	49.5	79.0	46.0	0.19	S W	207	8	Variable.
9	29.705	55.0	50.1	63.0	50.0	78.0	46.5	0.19	N N W	301	10	Showery.
10	29.820	60.0	54.9	67.7	53.0	85.0	48.0	0.02	N	245	4	Showery.
11	29.917	63.4	56.0	75.0	49.0	93.0	47.0	...	W N W	170	5	Fair.
12	29.840	65.7	60.2	77.0	59.0	93.0	55.0	0.03	W S W	293	10	Overcast.
13	29.762	62.8	57.9	72.0	56.5	77.0	52.5	...	W S W	326	5	Fair.
14	29.675	66.0	58.8	76.7	56.0	90.0	53.5	...	S S W	138	4	Fair.
15	29.622	69.4	62.2	84.0	61.0	104.0	57.0	0.30	W S W	132	8	Variable.
16	29.767	62.4	58.6	70.0	53.5	84.0	53.0	0.06	S W	91	5	Fair after 3 <sup>h</sup> .
17	29.836	63.6	56.4	77.5	53.0	97.0	51.0	...	S W	116	4	Light clouds.
18	29.935	61.9	55.0	74.0	48.0	89.0	47.0	...	W	184	6	Fair.
19	29.857	62.5	54.4	73.0	48.0	84.0	47.0	...	W S W	126	4	Fair.
20	29.569	63.3	56.2	75.5	53.5	97.0	51.0	0.44	S W	311	8	Changeable.
21	29.679	58.9	52.5	68.0	48.0	81.0	48.0	...	W S W	261	4	Fair.
22	29.720	61.4	57.0	68.0	56.0	86.0	52.0	0.01	S S W	177	8	Dull & Damp.
23	29.664	63.9	57.2	72.0	57.5	93.0	53.5	...	W S W	166	10	Overcast.
24	29.304	62.3	57.0	72.0	55.0	89.0	49.5	0.03	S W	535	8	Showery.
25	29.561	59.1	52.8	66.5	51.0	78.0	47.0	...	W S W	409	8	Heavy clouds.
26	29.715	58.7	52.6	68.5	49.5	85.0	47.0	...	W S W	150	9	Fair.
27	29.554	59.2	55.5	69.0	55.0	77.0	52.0	0.80	E N E	277	10	Raining.
28	29.816	55.9	50.3	66.5	45.0	88.0	45.0	...	N E	173	5	Fair.
29	29.885	56.3	49.8	67.0	42.5	88.0	41.5	...	N N E	118	3	Fair.
30	29.927	61.2	52.8	71.0	49.5	89.0	45.0	...	W N W	184	5	Fair.
31	30.022	60.4	53.6	71.0	47.0	94.0	45.0	...	N	105	8	Fair.
Mean or Sum.	29.733	59.9	53.9	69.5	51.1	84.9	48.4	2.29	S 64° W	6789	7	

## MOON'S PHASES, &amp;c.

	d.	h.		d.	h.		d.	h.
Last Quarter .....	3.	19.	New .....	10.	9.	Apogee .....	22.	6.
Perigee .....	9.	15.	First Quarter .....	17.	9.	Full .....	25.	12.

[24] *Daily Results of Meteorological Observations made at the*

AUGUST, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Rain.	Wind.		Amount of Cloud.	Weather.
		Air.	Evap.	Shade.		Sun.	Grass.		Direction.	Hourly Motion.		
				Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.999	60.4	54.4	74.0	44.0	91.0	43.0	...	SE	169	3	Fair.
2	29.718	63.6	57.0	74.0	54.0	87.5	49.0	...	S	205	9	Cloudy.
3	29.680	63.3	57.4	75.0	51.0	93.5	50.5	...	WSW	238	5	Fair.
4	29.708	63.4	59.2	72.0	58.0	87.0	54.0	0.01	WSW	326	7	Showery.
5	29.866	60.0	54.1	70.0	51.0	87.0	46.0	...	WSW	322	5	Fair.
6	30.121	57.1	51.6	67.0	43.0	81.0	41.0	...	NNW	171	4	Fair.
7	30.183	61.2	54.8	73.5	46.2	95.4	44.0	...	NNE	110	0	Fair.
8	30.134	61.0	54.4	74.2	46.5	92.5	42.5	...	ENE	149	1	Fair.
9	29.959	63.8	58.0	74.5	53.9	96.5	48.2	...	NE	182	5	Fair.
10	29.824	67.9	63.0	78.0	60.5	92.0	52.0	...	NNE	211	9	Cloudy.
11	29.800	70.2	65.8	81.0	59.0	101.5	55.0	0.29	SE	98	8	Stormy.
12	29.775	67.1	61.7	81.0	56.0	96.0	53.0	...	WSW	161	5	Heavy clouds.
13	29.777	62.9	58.0	74.0	53.5	86.0	50.0	0.07	W	153	7	Fair till 21 <sup>h</sup> .
14	29.728	56.0	55.0	62.0	53.5	78.0	48.0	0.54	W	164	7	Showery.
15	29.828	63.1	58.0	70.5	57.0	89.0	52.0	...	SW	281	6	Fair.
16	29.684	61.8	57.4	68.5	55.0	76.0	50.0	...	S	305	7	Fair.
17	29.508	62.3	59.5	73.5	56.5	79.0	53.0	0.06	S	284	10	Showery.
18	29.455	64.5	62.1	72.5	59.0	75.0	55.0	0.20	S	172	10	Showery.
19	29.560	63.8	59.4	73.5	57.0	92.0	53.5	...	W	180	6	Fair.
20	29.705	58.1	53.9	66.0	53.5	74.5	47.5	...	NW	362	4	Fair.
21	29.637	62.1	58.5	64.0	57.0	82.0	52.0	0.13	WSW	346	8	Stormy. Rain.
22	29.813	62.6	57.2	70.0	48.0	91.0	46.0	...	WNW	106	3	Fair.
23	29.924	61.1	57.7	72.5	49.5	93.0	46.0	...	WSW	108	3	Fair.
24	29.897	63.7	59.3	73.0	56.0	88.5	51.0	0.05	NW	166	8	Variable.
25	29.904	54.1	50.8	65.0	47.0	76.0	45.0	...	NW	277	5	Fair.
26	29.827	58.9	53.0	65.0	55.5	72.0	49.0	...	WNW	277	8	Fair.
27	29.680	55.1	50.1	64.0	46.5	71.0	44.0	...	WNW	313	7	Fair.
28	29.603	52.9	47.9	62.0	43.0	72.0	41.0	...	WNW	203	5	Fair.
29	29.514	57.9	53.1	66.0	54.0	75.0	49.0	0.08	SW	328	6	Variable.
30	29.533	53.3	49.1	63.0	44.0	79.0	41.5	...	SW	326	4	Fair.
31	29.510	55.9	52.5	64.5	51.0	83.0	46.0	...	SW	333	10	Dull.
Mean or Sum.	29.769	60.9	56.3	70.4	52.2	84.9	48.3	1.43	S 78° W	7026	6	

MOON'S PHASES, &c.

	d. h.		d. h.		d. h.
Last Quarter .....	2. 2.	First Quarter .....	16. 0.	Full .....	24. 2.
Perigee .....	6. 20.	Apogee .....	18. 19.	Last Quarter .....	31. 8.
New .....	8. 17.				

## SEPTEMBER, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Temp- erature.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
		Air.	Evap.	Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
				Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.578	55.3	51.8	66.0	44.0	82.0	42.0	0.03	S W	286	5	Fair after 1 <sup>h</sup> 30 <sup>m</sup>
2	29.562	62.5	58.5	67.5	59.0	74.0	55.0	0.01	S W	479	8	Heavy clouds.
3	29.591	63.9	61.3	70.5	60.0	82.0	57.0	0.16	S S W	450	9	Dull & damp.
4	29.587	56.6	55.8	67.0	46.0	70.0	46.0	0.57	S W	202	10	Showery.
5	29.622	54.1	51.1	65.0	45.5	79.0	44.0	...	S W	268	5	Fair.
6	29.580	57.3	54.1	65.0	53.0	82.0	49.0	...	S S W	320	7	Fair.
7	29.630	59.2	56.3	65.0	55.0	74.0	52.0	0.03	S W	259	10	Overcast.
8	29.802	56.3	52.7	66.5	47.5	77.0	45.0	...	W N W	202	7	Fair.
9	29.744	60.6	58.4	66.0	55.5	79.5	51.0	...	S S W	360	9	Overcast.
10	29.789	63.0	59.6	68.0	59.0	72.0	55.0	...	S S W	392	10	Overcast.
11	29.973	63.3	59.8	71.0	54.5	85.0	51.0	...	S	223	5	Fair.
12	29.923	63.2	58.9	79.0	49.5	98.0	47.0	...	S	217	0	Very fine.
13	29.898	63.4	58.8	77.0	53.0	100.0	49.0	...	N E	86	0	Fine.
14	30.002	61.0	58.0	67.0	58.0	70.0	53.5	...	E N E	120	8	Overcast.
15	29.920	60.3	57.4	71.0	51.5	88.0	50.0	...	E	65	5	Fair.
16	29.703	64.2	59.8	74.5	56.0	92.0	52.0	...	E S E	152	4	Fair.
17	29.531	63.0	59.4	74.0	53.0	87.0	49.0	0.27	S	279	8	Thunderstorm.
18	29.912	51.7	49.5	64.0	41.0	76.0	44.0	...	W N W	80	4	Fair.
19	29.921	56.2	54.7	60.5	54.0	59.0	51.0	0.46	N E	146	10	Showery.
20	30.032	58.0	56.3	61.5	55.0	64.0	52.0	...	N E	119	10	Overcast.
21	29.783	59.1	56.1	63.5	55.0	72.0	51.0	0.52	E	207	9	Variable.
22	29.449	62.2	60.6	67.0	58.0	70.0	52.0	0.17	S S E	290	8	Showery.
23	29.600	59.0	56.5	66.5	51.5	73.0	49.0	0.05	S W	405	10	Overcast.
24	30.218	51.5	48.7	62.5	42.5	71.0	44.0	...	N W	145	5	Fair.
25	30.306	54.8	53.0	64.0	46.5	80.0	47.0	...	W S W	140	7	Fair. Foggy.
26	30.181	60.2	57.3	64.0	54.5	81.0	49.0	...	N W	100	7	Overcast.
27	30.019	57.9	56.2	63.0	54.0	64.0	51.0	...	W S W	178	8	Fair. Foggy.
28	29.933	57.4	56.1	63.0	55.0	71.0	52.0	...	N	70	10	Overcast.
29	29.549	61.2	59.1	66.5	57.0	79.0	53.0	0.25	S	168	7	Showery.
30	29.690	50.6	49.0	65.0	41.5	79.0	39.0	...	W	263	5	Fair.
Mean or Sum.	29.801	58.9	56.2	67.0	52.2	78.3	49.4	2.52	S 45° W	6671	7	

## MOON'S PHASES, &amp;c.

	d. h.		d. h.		d. h.
Perigee .....	3. 14.	Apogee .....	15. 13.	Perigee .....	29. 6.
New .....	7. 2.	Full .....	22. 15.	Last Quarter .....	29. 14.
First Quarter .....	14. 17.				

OCTOBER, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Rain.	Wind.		Amount of Cloud.	Weather.
		Air.	Evap.	Shade.		Sun.	Grass.		Direction.	Hourly Motion.		
				Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.809	54.2	50.5	59.0	50.0	75.0	45.0	...	S	362	3	Cloudy.
2	29.812	55.7	52.2	61.0	51.0	75.5	46.0	...	S	377	9	Fair.
3	29.768	57.7	53.7	62.5	53.5	76.5	49.0	...	SSW	338	9	Overcast.
4	29.634	52.5	52.2	63.5	43.8	72.0	40.0	0.24	SW	310	5	Variable.
5	29.718	47.1	44.4	56.0	40.5	73.0	37.0	0.07	WSW	331	4	Showery.
6	29.568	52.3	48.6	58.0	47.0	71.5	42.5	0.13	SSW	392	8	Stormy.
7	29.235	50.6	47.7	62.0	41.0	71.5	39.0	0.21	WSW	336	6	Showery.
8	29.665	43.8	41.2	54.0	33.5	68.0	33.0	...	WSW	157	3	Fair.
9	29.528	51.1	47.8	56.0	45.0	71.5	41.0	...	SSW	341	6	Fair till 21 <sup>h</sup> .
10	29.245	48.0	46.8	53.5	40.5	57.0	37.0	0.37	SW	245	10	Showery.
11	29.595	42.4	40.8	50.0	35.5	63.0	33.0	...	SSW	198	2	Fair. Lightning.
12	29.788	53.0	50.2	58.5	47.0	70.0	39.0	0.03	S	364	10	Dull.
13	29.950	58.0	56.1	63.0	52.5	68.0	48.0	0.01	S	184	10	Variable.
14	29.953	58.2	56.3	63.0	55.0	71.0	51.0	...	SSE	198	10	Overcast.
15	29.731	55.8	53.5	63.0	47.5	63.0	46.0	...	SE	133	10	Overcast. Fog.
16	29.588	54.4	52.4	58.5	48.5	66.0	46.0	...	SSW	106	6	Fair.
17	29.661	48.9	46.9	58.0	44.0	73.0	41.0	0.20	NW	178	7	Dull & foggy.
18	29.504	46.6	46.2	49.5	44.0	48.0	41.5	0.19	N	558	10	Stormy.
19	29.475	53.5	52.4	56.0	48.5	55.5	45.5	0.28	SE	308	10	Rain till 7 <sup>h</sup> .
20	29.579	52.2	50.6	58.0	46.0	62.0	44.0	...	N	184	10	Overcast.
21	29.788	52.1	49.8	57.5	48.5	74.0	46.0	...	N	203	7	Fair.
22	29.882	51.2	49.1	56.0	48.0	68.5	45.0	0.01	N	198	8	Fair.
23	29.862	50.8	48.9	55.0	46.5	67.0	44.0	...	N	203	6	Fair.
24	29.975	50.2	48.8	52.0	48.5	52.0	45.5	0.02	NNW	240	10	Damp.
25	30.105	50.3	48.5	51.5	47.5	67.0	44.5	...	NNW	164	8	Overcast.
26	30.112	46.9	45.2	54.5	40.0	73.0	38.0	...	NW	95	5	Fair. Fog.
27	29.967	49.9	47.1	55.5	44.5	72.0	40.5	0.11	SW	199	9	Variable.
28	29.990	43.5	41.3	55.5	34.0	55.0	31.5	0.11	NNE	307	3	Rain till 5 <sup>h</sup> .
29	30.324	40.5	37.5	46.0	37.0	58.0	31.0	...	N	203	8	Hazy.
30	30.398	38.8	36.7	47.0	34.0	66.0	32.0	...	N	77	5	Thick fog.
31	30.335	41.7	39.7	46.5	36.0	63.0	33.0	...	N	13	7	Fair. Foggy.
Mean or Sum.	29.792	50.1	47.8	56.1	44.5	66.7	41.1	1.98	S 67° W	7502	7	

MOON'S PHASES, &c.

	d. h.		d. h.		d. h.
New .....	6. 14.	First Quarter .....	14. 13.	Perigee .....	25. 6.
Apogee .....	13. 9.	Full .....	22. 3.	Last Quarter .....	28. 21.

## NOVEMBER, 1858.

Day	Mean Barom. Reduced to 32°.	Mean Tempera- ture.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
				Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
		Air.	Evap.	Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	30.259	46.4	44.8	50.0	40.5	54.0	37.0	0.01	N	100	9	Rain & fog.
2	30.194	43.2	41.0	50.5	35.0	65.0	33.0	...	NE	166	7	Fair. Foggy.
3	30.133	46.9	44.9	50.0	42.5	51.0	40.0	...	NE	132	10	Overcast.
4	30.061	48.2	46.1	52.5	42.0	...	38.5	0.03	NE	152	9	Cloudy.
5	30.060	44.0	40.6	51.0	36.0	...	33.0	0.02	N	293	8	Variable.
6	30.213	39.7	36.8	47.0	34.5	...	32.0	...	NNE	315	9	Dull.
7	30.199	40.1	37.6	44.5	34.5	...	31.0	...	NNE	223	5	Fair.
8	30.190	42.5	40.5	48.0	36.5	...	33.0	...	N	245	3	Fair.
9	30.277	35.8	31.3	44.5	26.0	...	26.0	...	NE	106	0	Fair.
10	30.162	37.0	35.9	46.5	30.0	...	28.0	...	NE	88	3	Hazy.
11	29.990	37.2	35.2	45.5	29.0	...	26.0	...	E	184	3	Fair.
12	29.655	35.5	31.7	42.0	27.0	...	25.0	...	ENE	170	6	Fair.
13	29.259	42.3	39.7	45.0	33.5	...	29.0	...	NE	306	10	Showery.
14	29.393	41.3	36.6	46.0	36.0	...	32.0	...	ENE	614	10	Overcast.
15	29.379	37.4	33.2	41.5	34.5	...	29.5	...	E	555	7	Fair.
16	29.271	36.6	34.0	40.0	32.5	...	28.5	...	NE	416	9	Fair.
17	29.478	32.4	30.5	40.5	26.5	...	24.0	...	NE	277	4	Fair.
18	29.596	32.1	30.7	40.5	26.5	...	25.0	...	NNE	156	3	Fair. Fog.
19	29.726	29.3	29.0	32.0	27.0	...	25.0	...	NNE	98	7	Foggy.
20	29.908	33.5	32.9	39.0	28.5	...	27.0	...	SW	230	7	Foggy.
21	29.985	31.6	30.3	41.0	25.5	...	24.0	...	NE	140	0	Fair.
22	29.984	26.6	28.2	39.5	18.0	...	21.0	...	NE	109	5	Fair.
23	29.781	23.4	24.0	29.0	15.7	...	15.0	...	NE	62	7	Foggy.
24	29.445	34.3	33.6	43.0	25.5	...	24.0	0.01	ESE	184	10	Overcast.
25	29.072	49.7	48.4	52.0	42.0	...	34.5	0.20	S	286	10	Rain.
26	28.986	51.1	49.0	54.5	47.5	...	40.0	0.07	S	364	6	Fair.
27	28.826	49.2	47.9	51.0	45.0	...	39.0	0.12	S	161	10	Overcast.
28	29.023	48.6	46.9	51.0	43.0	...	37.5	0.15	SSW	299	6	Showery.
29	28.962	48.4	46.6	53.0	43.0	...	39.0	0.09	SSW	348	10	Stormy.
30	29.269	44.3	41.4	46.5	39.5	...	35.0	...	W	394	5	Fair.
Mean or Sum.	29.688	39.6	37.6	45.2	33.4	...	30.4	0.70	N 50° E	7173	7	

The maximum thermometer for solar radiation was broken after Nov. 3rd.

## MOON'S PHASES, &amp;c.

	d. h.		d. h.		d. h.
New .....	5. 5.	First Quarter .....	13. 9.	Perigee .....	22. 5.
Apogee .....	10. 5.	Full .....	20. 14.	Last Quarter .....	27. 6.

DECEMBER, 1858.

Day.	Mean Barom. Reduced to 32°.	Mean Temper- ature.		Self-Registering Ther- mometers.				Rain.	Wind.		Amount of Cloud.	Weather.
				Shade.		Sun.	Grass.		Direc- tion.	Hourly Motion.		
		Air.	Evap.	Max.	Min.	Max.	Min.					
	Inches.	°	°	°	°	°	°	Inches.		Miles.		
1	29.550	48.1	45.6	50.5	44.0	60.0	37.5	0.11	S W	329	7	Variable.
2	29.772	40.6	38.4	50.5	33.0	51.0	30.0	...	S W	272	4	Fair.
3	29.831	50.5	48.7	52.0	38.5	63.0	34.0	...	S S W	367	9	Overcast.
4	29.749	44.7	43.4	53.5	37.5	54.0	33.0	0.04	S W	270	1	Fair after 1 <sup>h</sup> .
5	30.033	37.8	36.3	48.0	27.0	58.0	26.5	...	W N W	148	0	Fair. Foggy.
6	30.087	34.3	33.5	39.0	28.5	57.5	27.0	0.01	N W	33	7	Fine till 4 <sup>h</sup> .
7	30.026	36.6	35.6	37.0	33.0	37.0	31.0	...	E N E	102	10	Dull & damp.
8	30.086	38.5	37.3	39.0	36.0	39.5	33.0	...	S E	98	10	Overcast.
9	30.117	38.8	36.5	40.0	36.5	42.0	34.0	...	S E	126	10	Overcast.
10	30.097	34.2	32.9	37.5	32.5	37.0	30.0	...	S S E	158	10	Dull & damp.
11	30.033	37.2	35.6	37.5	35.0	37.0	36.5	...	S	263	10	Dull.
12	29.732	38.6	37.5	43.0	35.0	43.0	35.0	0.14	S	277	10	Dull.
13	29.834	37.8	37.1	44.5	32.5	51.5	32.0	0.01	W N W	115	10	Overcast.
14	30.066	34.8	34.6	36.0	33.0	36.0	32.0	0.01	N	81	10	Wet fog.
15	29.944	37.9	36.8	39.5	33.5	39.5	32.0	...	E S E	257	10	Fog & mist.
16	29.910	38.7	37.7	39.0	36.0	38.5	33.5	0.36	S E	202	10	Rain till 12 <sup>h</sup> .
17	29.560	42.5	41.1	47.0	36.0	47.0	33.0	0.04	S S E	322	10	Stormy.
18	29.290	46.9	45.1	50.0	42.0	54.0	37.0	0.48	S S W	473	6	Stormy.
19	29.344	40.4	38.5	46.5	34.5	62.0	30.5	0.07	S W	322	4	Variable.
20	29.534	43.7	41.9	47.0	37.5	61.0	33.5	0.03	S W	322	7	Fair till 12 <sup>h</sup> .
21	29.437	50.0	47.4	54.0	41.5	52.0	37.0	0.06	S W	554	7	Stormy.
22	29.493	46.2	43.6	47.0	41.5	56.0	37.0	0.01	S W	581	7	Changeable.
23	29.119	45.5	42.7	50.5	39.0	51.0	34.0	0.05	S W	606	7	Variable.
24	29.400	40.0	38.2	46.0	34.0	59.0	29.5	0.04	S W	329	6	Showery.
25	29.226	43.5	42.1	46.5	39.0	46.0	34.0	0.40	S W	400	7	Rain.
26	29.167	43.7	40.5	49.5	38.0	61.0	33.0	0.01	W S W	495	9	Stormy.
27	29.402	40.2	37.8	45.0	36.5	57.5	31.5	...	W	299	7	Fair.
28	29.589	39.6	37.9	43.0	35.5	55.0	31.0	0.01	W	239	5	Variable.
29	29.918	40.2	38.1	44.0	34.0	52.5	31.0	0.01	W N W	245	6	Fair till 12 <sup>h</sup> .
30	29.926	44.6	43.8	45.0	40.0	45.0	36.0	0.07	W S W	105	10	Foggy.
31	30.088	45.0	44.0	45.5	42.0	45.0	38.0	0.17	S S W	205	10	Drizzle & fog.
Mean or Sum.	29.721	41.3	39.7	44.9	36.2	50.0	30.7	2.13	S 38° W	8595	8	

MOON'S PHASES, &c.

	d. h.		d. h.		d. h.
New .....	4. 22.	First Quarter .....	13. 3.	Perigee .....	20. 14.
Apogee .....	7. 20.	Full .....	20. 1.	Last Quarter .....	26. 18.

## CHARACTERISTICS OF THE WEATHER FOR EACH MONTH.

### JANUARY, 1858.

	d. h.	in.
Barom. Highest, 23. 12, .....		30·445.
„ Lowest, 31. 12, .....		29·564.
„ Mean for the month, .....		30·109,
being 0·388 above the average.		
Temp. Highest on the 8th, .....		53°.
„ Lowest on the 23rd, .....		29°5.
„ Mean for the month, .....		37°7,
being 0°0 above the average.		

Rain fell on the 3rd, 7th, 8th, 9th, 10th, 12th, 15th, 29th, & 30th, to the amount of 0·268, being 1·31 below the average.

Sleet fell on the 31st.

Fog was prevalent on the 2nd, 11th, 13th, 14th, 23rd, 24th, & 27th.

Rime and frost on the 15th and 23rd.

Lunar halo on the 25th at 10<sup>h</sup>.

The weather generally fine and seasonable.

### FEBRUARY, 1858.

	d. h.	in.
Barom. Highest, 24. 22, .....		30·201.
„ Lowest, 3. 18, .....		29·279.
„ Mean for the month, .....		29·787,
being 0·087 above the average.		
Temp. Highest on the 5th, .....		51°5.
„ Lowest on the 18th, .....		22°0.
„ Mean for the month, .....		34°6,
being 4°0 below the average.		

Rain fell on the 2nd, 3rd, 4th, 11th, 12th, 13th, 14th, and 23rd, to the amount of 1·277, being 0·06 below the average.

Snow fell on the 1st, 2nd, 12th, 23rd, and 27th.

Sleet fell on the 23rd.

### MARCH, 1858.

	d. h.	in.
Barom. Highest, 21. 22, .....		30·403.
„ Lowest, 7. 12, .....		28·810.
„ Mean for the month, .....		29·727,
being 0·037 above the average.		
Temp. Highest on the 24th, .....		66°6.
„ Lowest on the 10th, .....		13°0.
„ Mean for the month, .....		41°3,
being 0°1 below the average.		

Rain fell on the 4th, 5th, 7th, 12th, 13th, 14th, 15th, 30th, and 31st, to the amount of 0·280, being 1·01 below the average.

Snow fell on the 1st, 5th, 7th, and 10th.

Hail fell on the 5th.

Fog was prevalent on the 22nd.

Auroras on the 13th at 7<sup>h</sup>. 30<sup>m</sup>, and 14th at 9<sup>h</sup>. 30<sup>m</sup>.

Lunar halos were seen on the 20th and 26th.

The weather during the first part of the month was cold and stormy; afterwards it was fair and temperate.



## APRIL, 1858.

	d. h.	d. h.	in.
Barom. Highest,	21. 22, & 22. 10, ...		30.190.
„ Lowest,	30. 20, .....		28.850.
„ Mean for the month,	.....		29.720,
			being 0 <sup>1</sup> .020 above the average.

Temp. Highest on the 22nd, .....	71.0.
„ Lowest on the 1st, .....	25.0.
„ Mean for the month, .....	46.6,
	being 0° 6 above the average.

Rain fell on the 2nd, 3rd, 5th, 6th, 7th, 8th, 16th, 17th, 25th, 28th, 29th, and 30th, to the amount of 3<sup>1</sup>.55, being 1<sup>1</sup>.61 above the average.

Snow fell on the 2nd and 8th.

Hail fell on the 8th and 30th.

A thunderstorm occurred on the 16th.

An aurora on the 10th, at 10<sup>h</sup>.

Lunar halo on the 19th, at 9<sup>h</sup>.

Fog was prevalent on the 13th, 17th, 18th, & 27th.

The weather stormy to the 17th; fair afterwards.

## MAY, 1858.

	d. h.	in.
Barom. Highest,	25. 22, .....	30.318.
„ Lowest,	1. 0, .....	28.882.
„ Mean for the month,	.....	29.727,
		being 0 <sup>1</sup> .006 below the average.

Temp. Highest, May 31, .....	79.0.
„ Lowest, May 7, .....	33.5.
„ Mean for the month, .....	51.6,
	being 0° 8 below the average.

Rain fell on the 1st, 2nd, 4th, 8th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 22nd, 23rd, 24th, & 25th, to the amount of 2<sup>1</sup>.35, being 0<sup>1</sup>.18 above the average.

Hail fell on the 13th.

Thunderstorms on the 4th, 12th, 13th.

An aurora was seen on the 7th, from 12<sup>h</sup> to 13<sup>h</sup>.

A lunar halo on the 20th, at 9<sup>h</sup>. 45<sup>m</sup>.

Fog prevalent on the 11th.

Cold and stormy the first part of the month; temperate and fair afterwards.

## JUNE, 1858.

	d. h.	in.
Barom. Highest,	22. 18, .....	30.175.
„ Lowest,	16. 18, .....	29.564.
„ Mean for the month,	.....	29.864,
		being 0 <sup>1</sup> .139 above the average.

Temp. Highest on the 15th, .....	90.0.
„ Lowest on the 27th, .....	44.0.
„ Mean for the month, .....	63.8,
	being 5° 2 above the average.

Rain fell on the 2nd, 8th, 12th, and 16th, to the amount of 1<sup>1</sup>.59, being 0<sup>1</sup>.75 below the average.

Thunderstorms on the 2nd, 8th, and 16th.

Lightning without thunder on the 3rd, 4th, 5th, 8th, 10th, 11th, 13th, and 15th.

An aurora on the 6th, from 10<sup>h</sup> to 11<sup>h</sup>.

The weather remarkably hot during part of this month.

## JULY, 1858.

	d. h.	in.
Barom. Highest,	31. 22, .....	30·076.
„ Lowest,	24. 16, .....	29·180.
„ Mean for the month, .....		29·733,
		being 0 <sup>in</sup> ·012 above the average.
Temp. Highest on the 15th, .....		84·0.
„ Lowest on the 29th, .....		42·5.
„ Mean for the month, .....		59·9,
		being 1°·5 below the average.

Rain fell on the 2nd, 4th, 5th, 7th, 8th, 9th, 10th, 12th, 15th, 16th, 20th, 22nd, 24th, and 27th, to the amount of 2<sup>in</sup>·29, being 0<sup>in</sup>·22 below the average.

A thunderstorm on the 15th, at midnight.

A lunar rainbow on the 25th, at 10<sup>h</sup>.

The weather temperate, and the sky generally cloudy.

## AUGUST, 1858.

	d. h.	in.
Barom. Highest,	6. 22, .....	30·217.
„ Lowest,	18. 16, .....	29·408.
„ Mean for the month, .....		29·769,
		being 0 <sup>in</sup> ·039 above the average.
Temp. Highest on the 11th & 12th, ...		81·0.
„ Lowest on the 6th & 28th, ...		43·0.
„ Mean for the month, .....		60·9,
		being 1°·2 above the average.

Rain fell on the 4th, 11th, 13th, 14th, 17th, 18th, 21st, 24th, 29th, and 31st, to the amount of 1<sup>in</sup>·43, being 1<sup>in</sup>·20 below the average.

A thunderstorm on the 11th, from 9<sup>h</sup> to 11<sup>h</sup>.

Distant thunder on the 12th.

The weather generally fair and warm.

A brilliant meteor on the 5th, at 9<sup>h</sup>. 45<sup>m</sup>.

## SEPTEMBER, 1858.

	d. h.	in.
Barom. Highest,	24. 22, .....	30·360.
„ Lowest,	23. 0, .....	29·365.
„ Mean for the month, .....		29·801,
		being 0 <sup>in</sup> ·083 above the average.
Temp. Highest on the 12th, .....		79·0.
„ Lowest on the 18th, .....		41·0.
„ Mean for the month, .....		58·9,
		being 3°·8 above the average.

Rain fell on the 1st, 2nd, 3rd, 4th, 7th, 17th, 19th, 21st, 22nd, 23rd, and 29th, to the amount of 2<sup>in</sup>·52, being 0<sup>in</sup>·15 below the average.

Fog prevalent on the 15th, 25th, and 27th.

A thunderstorm on the 17th, from 9<sup>h</sup> to 10<sup>h</sup>.

Strong lightning on the 22nd, from 6<sup>h</sup> to 8<sup>h</sup>.

Sky generally cloudy. On the 12th and 13th very fine.

## OCTOBER, 1858.

	d. h.	d. h.	in.
Barom. Highest,	29. 22,	& 30. 10,	... 30.417.
„ Lowest,	7. 0,	.....	29.100.
„ Mean for the month,	.....	29.792,	being 0.1108 above the average.
			°
Temp. Highest on the 4th,	.....	63.5.	
„ Lowest on the 8th,	.....	33.5.	
„ Mean for the month,	.....	50.1,	being 0.8 above the average.

Rain fell on the 4th, 5th, 6th, 7th, 10th, 12th, 13th, 17th, 18th, 19th, 22nd, 24th, 27th, and 28th, to the amount of 1.198, being 0.165 below the average.

Fog prevalent on the 15th, 26th, 29th, 30th, and 31st.

Lightning seen on the 8th and 11th.

The weather mild and the sky generally cloudy.

## NOVEMBER, 1858.

	h. d.	in.
Barom. Highest,	9. 10,	..... 30.303.
„ Lowest,	27. 4,	..... 28.782.
„ Mean for the month,	.....	29.688,
		being 0.1111 above the average.
		°
Temp. Highest on the 26th,	.....	54.5.
„ Lowest on the 23rd,	.....	15.7.
„ Mean for the month,	.....	39.6,
		being 3.9 below the average.

Rain fell on the 1st, 4th, 5th, 24th, 25th, 26th, 27th, 28th, and 29th, to the amount of 0.170, being 1.177 below the average.

Fog prevalent on the 1st, 2nd, 3rd, 4th, 9th, 10th, 11th, 12th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, and 27th.

Lunar halos seen on the 15th and 17th.

A brilliant meteor on the 12th, at 9<sup>h</sup>. 30<sup>m</sup>.

Hoar-frost from the 18th to the 23rd.

The weather generally fine.

## DECEMBER, 1858.

	d. h.	in.
Barom. Highest,	31. 22,	..... 30.203.
„ Lowest,	23. 9,	..... 28.966.
„ Mean for the month,	.....	29.721,
		being 0.1114 above the average.
		°
Temp. Highest on the 21st,	.....	54.0.
„ Lowest on the 5th,	.....	27.0.
„ Mean for the month,	.....	41.3,
		being 2.0 above the average.

Rain fell on the 1st, 4th, 6th, 12th, 13th, 14th, 16th to 26th, 28th, 29th, 30th, 31st, to the amount of 2.113, being 0.110 below the average.

Hail fell on the 26th.

Fog prevalent on the 2nd, 3rd, 5th, 6th, 7th, 9th, 13th, 14th, 30th, and 31st.

A thunderstorm on the 21st.

Thunder heard on the 21st, 22nd, and 25th.

Lightning seen on the 21st, 23rd, and 24th.

Lunar halo on the 20th, from 8<sup>h</sup> to 9<sup>h</sup>.

The Table used in obtaining the differences from "average" is given in  
*Rad. Obs.* Vol. XVI. p. 51.

**DIURNAL INEQUALITIES.**  
**OF**  
**MEAN MONTHLY METEOROLOGICAL ELEMENTS,**  
**DEDUCED FROM THE**  
**TWO-HOURLY INDICATIONS OF THE PHOTOGRAPHIC REGISTERS,**  
**AT THE RADCLIFFE OBSERVATORY, OXFORD.**  
**IN THE YEAR**  
**1858.**

**RADCLIFFE OBSERVATIONS, 1858.**

**[ F ]**



## BAROGRAPHIC RESULTS.

TABLE I.

*Mean Monthly Heights of the Barometer for every Two Hours, 1858.*

Month.	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>	Mean.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	30·105	·096	·102	·111	·117	·111	·105	·100	·092	·091	·102	·116	30·104
February ..	29·795	·776	·771	·788	·796	·801	·796	·789	·780	·779	·792	·793	29·788
March ...	„ 742	·720	·711	·716	·726	·728	·730	·727	·719	·724	·737	·751	29·728
April .....	„ 733	·720	·717	·715	·726	·730	·732	·711	·702	·713	·725	·726	29·721
May .....	„ 712	·701	·701	·707	·723	·732	·735	·735	·735	·746	·752	·751	29·728
June .....	„ 867	·860	·844	·846	·857	·875	·873	·867	·868	·876	·880	·878	29·866
July .....	„ 743	·732	·722	·720	·728	·739	·735	·730	·731	·739	·747	·745	29·734
August ...	„ 783	·768	·756	·757	·773	·782	·778	·767	·762	·767	·775	·773	29·770
September	„ 803	·789	·782	·789	·806	·806	·809	·802	·792	·801	·815	·823	29·801
October ...	„ 784	·774	·770	·786	·799	·804	·801	·792	·787	·791	·807	·810	29·792
November.	„ 706	·687	·684	·694	·703	·702	·695	·688	·677	·677	·689	·696	29·692
December.	„ 703	·692	·700	·707	·714	·723	·730	·736	·737	·735	·739	·744	29·722
Means ...	29·790	·776	·772	·778	·789	·794	·793	·787	·782	·787	·797	·801	29·787

The Tables of “Mean Monthly” Results in this section are formed from the days in each month in which the two-hourly records are complete, no imperfect days being used; while in the preceding section use has been made of all the observations recorded. This will account for some slight differences in the monthly means.

[36] *Inequalities of Meteorological Elements in the Year 1858,*

Supposing the general expression for the height of the Barometer at the hour  $\frac{x}{15}$  after noon to be represented by the usual formula,

$$B_x = \beta + a \sin(x + A) + b \sin(2x + B) + c \sin(3x + C) + \&c.,$$

then the following Table gives the values of the constants  $\beta$ ,  $a$ ,  $b$ ,  $c$ ,  $A$ ,  $B$ ,  $C$ , derived from the solution of the equations formed by the substitution of the mean-monthly indications of the Barograph for every two hours in the general expression.

TABLE II.

*Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of Barometric Results for the Year 1858.*

Month.	$\beta$	$a$	$b$	$c$	$A$	$B$	$C$
	in.	in.	in.	in.	°	°	°
January .....	30°104	0°0062	0°0084	0°0049	357	165	171
February .....	29°788	°0043	°0111	°0030	275	149	139
March .....	29°728	°0080	°0124	°0040	145	139	158
April .....	29°721	°0040	°0112	°0028	32	137	309
May .....	29°728	°0210	°0124	°0038	198	181	233
June .....	29°866	°0127	°0093	°0034	188	143	346
July .....	29°734	°0082	°0079	°0025	156	144	353
August .....	29°770	°0021	°0109	°0036	199	131	24
September ...	29°801	°0073	°0136	°0031	184	155	195
October .....	29°792	°0084	°0143	°0035	219	169	202
November ...	29°692	°0063	°0103	°0036	2	139	124
December ...	29°722	0°0209	0°0080	0°0065	205	188	198

Substituting for  $x$ , (the hour angle from mean noon, expressed in degrees,) the values  $0^\circ$ ,  $15^\circ$ ,  $30^\circ$ ,  $45^\circ$ , ...  $315^\circ$ ,  $330^\circ$ , and  $345^\circ$ , we obtain the following Table, which gives the Hourly values of the Diurnal Inequalities for each Month.

TABLE III.

*Excess of the Mean Monthly Result of the Barograph at each Hour, above the Mean Monthly Result for the Day, for the Year 1858.*

Hour.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
h.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
0	+ '002	+ '005	+ '014	+ '008	- '010	+ '003	+ '008	+ '008	+ '005	- '003	+ '010	- '012
1	- '004	- '004	+ '003	+ '005	- '021	- '003	+ '004	+ '006	- '006	- '015	+ '005	- '024
2	- '008	- '012	- '007	+ '003	- '029	- '009	- '002	- '001	- '015	- '022	- '002	- '030
3	- '008	- '016	- '014	- '001	- '030	- '014	- '007	- '008	- '019	- '023	- '006	- '031
4	- '003	- '016	- '016	- '005	- '028	- '020	- '013	- '013	- '019	- '021	- '007	- '025
5	+ '003	- '011	- '015	- '007	- '023	- '023	- '015	- '016	- '015	- '014	- '005	- '018
6	+ '009	- '003	- '011	- '007	- '018	- '020	- '014	- '013	- '010	- '007	+ '001	- '012
7	+ '012	+ '005	- '006	- '002	- '013	- '016	- '011	- '007	- '004	+ '001	+ '007	- '008
8	+ '012	+ '010	- '003	+ '003	- '006	- '007	- '005	+ '001	+ '001	+ '007	+ '011	- '007
9	+ '010	+ '012	- '001	+ '009	- '002	'000	'000	+ '008	+ '004	+ '010	+ '013	- '005
10	+ '006	+ '012	+ '001	+ '013	+ '005	+ '007	+ '003	+ '013	+ '007	+ '013	+ '011	- '002
11	+ '003	+ '010	+ '002	+ '013	+ '008	+ '010	+ '004	+ '012	+ '008	+ '011	+ '008	+ '004
12	+ '002	+ '007	+ '002	+ '008	+ '010	+ '007	+ '002	+ '008	+ '007	+ '009	+ '004	+ '010
13	'000	+ '004	+ '001	- '001	+ '009	+ '005	- '002	+ '002	+ '004	+ '005	- '001	+ '014
14	- '004	+ '002	'000	- '009	+ '007	+ '001	- '004	- '003	- '001	'000	- '004	+ '011
15	- '008	- '002	- '004	- '015	+ '006	'000	- '005	- '006	- '005	- '005	- '010	+ '015
16	- '013	- '006	- '008	- '017	+ '006	+ '002	- '003	- '007	- '007	- '007	- '013	+ '013
17	- '015	- '009	- '009	- '015	+ '011	+ '005	+ '001	- '006	- '007	- '004	- '015	+ '012
18	- '013	- '009	- '005	- '009	+ '018	+ '012	+ '004	- '003	- '002	+ '001	- '015	+ '014
19	- '008	- '005	+ '002	- '002	+ '025	+ '014	+ '009	- '001	+ '006	+ '009	- '011	+ '012
20	'000	'000	+ '011	+ '003	+ '028	+ '015	+ '001	+ '003	+ '015	+ '015	- '005	+ '021
21	+ '006	+ '006	+ '019	+ '007	+ '026	+ '014	+ '002	+ '006	+ '020	+ '018	+ '003	+ '021
22	+ '010	+ '010	+ '023	+ '009	+ '017	+ '011	+ '003	+ '007	+ '019	+ '015	+ '009	+ '014
23	+ '008	+ '010	+ '022	+ '009	+ '004	+ '008	'000	+ '010	+ '014	+ '007	+ '012	+ '002



## THERMOGRAPHIC RESULTS.

TABLE IV.

*Mean Monthly Temperatures of the Air for every Two Hours, 1858.*

Month.	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>	Mean.
January ...	40°6	42°1	40°5	38°4	37°2	37°0	36°4	35°8	35°7	35°8	35°6	37°4	37°71
February ..	37°7	39°0	38°2	35°7	34°4	33°9	33°5	32°8	32°0	32°0	32°2	34°8	34°68
March ...	46°0	47°3	46°8	44°6	41°2	39°5	37°9	37°1	36°2	35°6	37°7	43°3	41°10
April .....	51°8	53°1	52°3	49°9	46°6	44°5	42°8	41°5	40°8	41°4	44°4	48°6	46°48
May .....	57°8	58°2	58°0	55°5	52°5	49°7	47°6	46°4	45°9	48°5	52°1	55°9	52°34
June .....	70°9	73°0	73°1	70°7	65°4	60°5	57°5	55°4	54°2	58°7	61°9	66°3	63°97
July .....	65°9	67°5	67°0	64°5	60°8	57°4	54°8	53°2	51°9	55°0	58°5	62°5	59°92
August ...	69°5	68°5	68°8	66°1	61°2	58°0	55°9	54°1	53°5	54°5	58°8	63°3	61°02
September	64°6	65°2	64°5	61°2	58°4	56°8	55°3	54°5	54°0	54°0	56°9	61°4	58°90
October ...	54°2	54°8	53°5	50°7	49°3	48°5	47°8	47°6	47°4	47°2	48°2	51°6	50°07
November.	44°3	45°3	43°2	41°2	40°2	39°3	38°6	38°6	38°3	38°2	38°3	40°8	40°53
December.	43°2	43°8	42°4	41°7	41°2	41°0	40°8	40°7	40°1	39°9	39°9	41°1	41°32
Means ...	53°88	54°82	54°03	51°68	49°03	47°18	45°74	44°81	44°17	45°07	47°04	50°58	49°00

The same remark is applicable to this Table as to Table I, namely, that the mean results are not quite identical with those given in the preceding section.

If

$$T_x = T + a \sin(x + A) + b \sin(2x + B) + c \sin(3x + C)$$

represent the mean monthly temperature of the air for any hour  $\frac{x}{15}$  after noon, then, as before, we find the following values for the constants.

TABLE V.

*Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of Thermographic Results, 1858.*

Month.	$T$	$a$	$b$	$c$	$A$	$B$	$C$
January .....	37.7	2.67	1.25	0.58	46	37	17
February .....	34.7	3.07	1.32	0.27	42	43	7
March .....	41.1	5.68	1.34	0.46	44	52	21
April .....	46.5	6.06	1.00	0.18	49	59	197
May .....	52.3	6.29	0.45	0.34	57	123	227
June .....	64.0	9.28	0.26	0.33	48	333	264
July .....	59.9	7.51	0.40	0.28	50	82	260
August .....	61.0	8.12	1.16	0.44	50	61	164
September ...	58.9	5.67	1.32	0.19	53	59	165
October .....	50.1	3.56	1.32	0.26	57	51	50
November ...	40.5	3.06	1.34	0.58	51	43	51
December ...	41.3	1.43	0.85	0.30	41	50	48

Substituting for  $x$ , the values  $0^\circ$ ,  $15^\circ$ ,  $30^\circ$ , &c., we obtain the following Table, which gives the Hourly values of the Diurnal Inequalities for each Month.

TABLE VI.

*Excess of the Mean Monthly Temperature of the Air at each Hour above the Mean Monthly Temperature for the Day, for the Year 1858.*

Hour.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	+ 2·8	+ 3·0	+ 5·2	+ 5·4	+ 5·4	+ 6·5	+ 5·9	+ 7·4	+ 5·7	+ 4·2	+ 3·7	+ 1·8
1	+ 4·0	+ 4·1	+ 6·6	+ 6·3	+ 5·8	+ 8·0	+ 7·0	+ 8·3	+ 6·5	+ 5·0	+ 4·7	+ 2·3
2	+ 4·4	+ 4·5	+ 7·1	+ 6·7	+ 6·0	+ 9·2	+ 7·6	+ 8·6	+ 6·6	+ 5·0	+ 4·7	+ 2·4
3	+ 3·9	+ 4·2	+ 6·7	+ 6·5	+ 5·9	+ 9·7	+ 7·7	+ 8·3	+ 6·1	+ 4·3	+ 4·0	+ 2·0
4	+ 3·0	+ 3·4	+ 5·5	+ 5·8	+ 5·4	+ 9·4	+ 7·2	+ 7·5	+ 5·2	+ 3·2	+ 2·9	+ 1·3
5	+ 1·6	+ 2·2	+ 4·5	+ 4·7	+ 4·5	+ 8·3	+ 6·1	+ 6·3	+ 3·9	+ 1·9	+ 1·6	+ 0·7
6	+ 0·6	+ 1·1	+ 2·6	+ 3·3	+ 3·3	+ 6·4	+ 4·5	+ 4·6	+ 2·5	+ 0·8	+ 0·7	+ 0·2
7	− 0·1	+ 0·2	+ 1·4	+ 1·7	+ 1·7	+ 4·0	+ 2·6	+ 2·7	+ 1·0	− 0·2	0·0	0·0
8	− 0·4	− 0·3	+ 0·5	+ 0·2	+ 0·1	+ 1·5	+ 0·8	+ 0·5	− 0·4	− 0·8	− 0·4	− 0·1
9	− 0·5	− 0·6	− 0·3	− 1·1	− 1·4	− 1·0	− 0·9	− 1·5	− 1·6	− 1·3	− 0·7	− 0·2
10	− 0·7	− 0·8	− 1·1	− 2·1	− 2·7	− 3·2	− 2·5	− 3·2	− 2·4	− 1·7	− 1·1	− 0·2
11	− 1·0	− 0·9	− 2·1	− 3·0	− 3·7	− 5·1	− 3·8	− 4·4	− 3·0	− 1·9	− 1·6	− 0·3
12	− 1·3	− 1·2	− 3·1	− 3·7	− 4·6	− 6·7	− 5·1	− 5·3	− 3·4	− 2·2	− 1·9	− 0·5
13	− 1·7	− 1·5	− 4·0	− 4·3	− 5·4	− 8·0	− 6·2	− 6·0	− 3·8	− 2·4	− 2·1	− 0·7
14	− 1·9	− 1·9	− 4·7	− 4·9	− 6·1	− 8·9	− 7·1	− 6·6	− 4·3	− 2·5	− 2·1	− 0·8
15	− 1·9	− 2·3	− 5·1	− 5·5	− 6·4	− 9·3	− 7·6	− 7·1	− 4·8	− 2·6	− 2·0	− 0·9
16	− 2·0	− 2·6	− 5·1	− 5·8	− 6·2	− 8·9	− 7·5	− 7·5	− 5·2	− 2·8	− 2·1	− 1·0
17	− 1·9	− 2·8	− 5·5	− 5·7	− 5·4	− 7·8	− 6·7	− 7·5	− 5·2	− 2·9	− 2·2	− 1·3
18	− 2·1	− 2·9	− 4·7	− 5·0	− 4·0	− 6·1	− 5·3	− 6·7	− 4·7	− 2·8	− 2·5	− 1·5
19	− 2·2	− 2·7	− 4·1	− 3·7	− 2·1	− 4·0	− 3·4	− 5·0	− 3·6	− 2·4	− 2·6	− 1·6
20	− 2·0	− 2·9	− 3·0	− 2·0	− 0·1	− 1·7	− 1·3	− 2·5	− 1·9	− 1·6	− 2·2	− 1·5
21	− 1·5	− 1·3	− 1·3	+ 0·1	+ 1·9	+ 0·5	+ 0·8	+ 0·4	+ 0·2	− 0·4	− 1·2	− 1·0
22	− 0·3	0·0	+ 0·8	+ 2·1	+ 3·5	+ 2·7	+ 2·8	+ 3·2	+ 2·4	+ 1·2	+ 0·4	− 0·1
23	+ 1·3	+ 1·4	+ 3·1	+ 4·0	+ 4·6	+ 4·6	+ 4·8	+ 5·6	+ 4·3	+ 2·9	+ 2·2	+ 0·9

## HYGROGRAPHIC RESULTS.

TABLE VII.

*Mean Monthly Temperatures of Evaporation for every Two Hours, 1858.*

Month.	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>	Mean.
January ...	37.3	38.3	37.2	35.3	34.1	34.3	34.0	33.6	33.5	33.7	33.6	35.1	35.00
February ..	37.4	38.9	38.0	35.6	34.3	33.9	33.4	32.8	31.9	32.0	32.0	34.6	34.57
March ....	42.0	42.8	42.7	41.3	39.3	37.8	36.7	36.1	35.4	34.8	36.6	40.7	38.85
April .....	42.9	43.5	42.9	41.4	39.6	38.5	37.7	37.0	36.7	37.1	39.1	41.4	39.82
May .....	51.9	51.7	51.4	50.4	49.3	48.1	46.8	45.9	46.1	47.8	49.3	51.4	49.18
June .....	60.8	61.5	61.2	60.4	58.3	55.8	54.0	52.6	51.9	54.8	57.0	58.5	57.23
July .....	56.2	56.8	56.7	56.0	55.0	53.4	51.8	50.9	50.0	51.6	53.6	54.9	53.91
August ...	58.9	59.5	59.7	58.4	56.7	54.9	53.8	53.0	52.5	53.0	55.3	57.7	56.12
September	59.1	59.1	58.8	58.1	56.1	55.1	53.9	53.2	52.7	52.7	54.9	57.5	55.93
October ...	50.2	50.3	49.7	48.4	47.4	46.9	46.4	46.5	46.2	46.1	46.8	49.0	47.83
November.	41.3	41.7	40.8	39.2	38.4	37.9	37.3	37.1	36.8	36.6	37.0	38.9	38.58
December.	41.2	41.5	40.6	40.0	39.7	39.4	39.4	39.1	38.6	38.5	38.6	39.6	39.68
Means ...	48.27	48.80	48.31	47.04	45.68	44.67	43.77	43.15	42.69	43.23	44.48	46.61	45.56

The same remark is applicable to this Table as to Table I, namely, that the mean results are not quite identical with those given in the preceding section.

[42] *Inequalities of Meteorological Elements in the Year 1858,*

Representing by the same general expression as before the mean-monthly temperature of evaporation at any hour, we find the following values of the constants.

TABLE VIII.

*Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of the Temperature of Evaporation, 1858.*

Month.	$T$	$a$	$b$	$c$	$A$	$B$	$C$
January .....	35°0	2°01	1°01	0°38	53	38	3
February .....	34°6	3°00	1°31	0°30	41	41	6
March .....	38°8	3°88	0°82	0°47	43	62	165
April .....	39°8	3°35	0°57	0°14	54	68	216
May .....	49°2	2°98	0°46	0°04	62	159	243
June .....	57°2	4°58	0°36	0°22	49	191	297
July .....	53°9	3°19	0°38	0°15	45	161	270
August .....	56°1	3°63	0°29	0°30	48	87	202
September ...	55°9	3°34	0°57	0°32	48	87	171
October .....	47°8	2°06	0°68	0°18	57	57	124
November ...	38°6	2°27	0°91	0°29	48	48	54
December ...	39°7	1°16	0°64	0°19	40	55	52

Substituting for  $x$ , in the general formula, the values  $0^\circ$ ,  $15^\circ$ ,  $30^\circ$ , &c., as before, we obtain the following Table, which gives the Hourly values of the Diurnal Inequalities for each Month.

TABLE IX.

*Excess of the Mean Monthly Temperature of Evaporation at each Hour, above the Mean Monthly Temperature for the Day, for the Year 1858.*

Hour.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	+ 2.2	+ 2.9	+ 3.5	+ 3.2	+ 2.8	+ 3.2	+ 2.2	+ 2.9	+ 3.1	+ 2.5	+ 2.6	+ 1.4
1	+ 3.1	+ 4.0	+ 3.9	+ 3.6	+ 2.8	+ 3.8	+ 2.6	+ 3.2	+ 3.3	+ 2.7	+ 3.2	+ 1.8
2	+ 3.4	+ 4.4	+ 4.0	+ 3.7	+ 2.7	+ 4.3	+ 2.8	+ 3.4	+ 3.3	+ 2.6	+ 3.3	+ 1.8
3	+ 3.0	+ 4.2	+ 3.9	+ 3.5	+ 2.4	+ 4.4	+ 2.9	+ 3.5	+ 3.1	+ 2.2	+ 2.8	+ 1.5
4	+ 2.2	+ 3.3	+ 3.6	+ 3.1	+ 2.1	+ 4.3	+ 2.9	+ 3.4	+ 2.9	+ 1.7	+ 2.1	+ 1.1
5	+ 1.2	+ 2.2	+ 3.2	+ 2.4	+ 1.7	+ 3.8	+ 2.6	+ 3.1	+ 2.5	+ 1.2	+ 1.3	+ 0.6
6	+ 0.2	+ 1.1	+ 2.6	+ 1.6	+ 1.3	+ 3.0	+ 2.1	+ 2.4	+ 2.0	+ 0.7	+ 0.7	+ 0.3
7	- 0.4	+ 0.3	+ 1.7	+ 0.7	+ 0.7	+ 2.0	+ 1.6	+ 1.5	+ 1.3	+ 0.1	+ 0.2	0.0
8	- 0.7	- 0.3	+ 0.6	- 0.2	+ 0.2	+ 1.0	+ 0.9	+ 0.5	+ 0.4	- 0.4	- 0.2	0.0
9	- 0.8	- 0.6	- 0.5	- 0.9	- 0.5	0.0	+ 0.3	- 0.5	- 0.4	- 0.8	- 0.4	- 0.1
10	- 0.8	- 0.7	- 1.3	- 1.4	- 1.2	- 1.1	- 0.5	- 1.3	- 1.1	- 1.1	- 0.7	- 0.1
11	- 0.9	- 0.9	- 1.8	- 1.8	- 1.8	- 2.2	- 1.2	- 1.9	- 1.6	- 1.3	- 1.0	- 0.2
12	- 1.0	- 1.1	- 2.1	- 2.1	- 2.4	- 3.3	- 2.0	- 2.3	- 1.9	- 1.3	- 1.3	- 0.4
13	- 1.2	- 1.5	- 2.2	- 2.4	- 2.9	- 4.3	- 2.7	- 2.7	- 2.3	- 1.3	- 1.4	- 0.5
14	- 1.4	- 1.9	- 2.6	- 2.8	- 3.3	- 4.9	- 3.3	- 3.1	- 2.6	- 1.4	- 1.5	- 0.6
15	- 1.4	- 2.2	- 3.1	- 3.1	- 3.3	- 5.1	- 3.7	- 3.5	- 3.0	- 1.5	- 1.6	- 0.8
16	- 1.4	- 2.5	- 3.7	- 3.2	- 3.0	- 4.8	- 3.6	- 3.7	- 3.4	- 1.7	- 1.7	- 0.9
17	- 1.4	- 2.7	- 4.1	- 3.1	- 2.4	- 4.0	- 3.2	- 3.6	- 3.5	- 1.8	- 1.9	- 1.1
18	- 1.5	- 2.8	- 4.0	- 2.6	- 1.6	- 2.8	- 2.4	- 3.0	- 3.1	- 1.8	- 2.0	- 1.3
19	- 1.4	- 2.7	- 3.3	- 1.8	- 0.6	- 1.6	- 1.4	- 2.0	- 2.3	- 1.5	- 2.0	- 1.3
20	- 1.3	- 2.3	- 2.0	- 0.7	+ 0.4	- 0.3	- 0.4	- 0.8	- 1.0	- 0.9	- 1.6	- 1.1
21	- 0.8	- 1.4	- 0.3	+ 0.5	+ 1.3	+ 0.7	+ 0.5	+ 0.5	+ 0.3	0.0	- 0.8	- 0.7
22	0.0	- 0.2	+ 1.4	+ 1.6	+ 2.1	+ 1.7	+ 1.2	+ 1.5	+ 1.6	+ 1.0	+ 0.3	0.0
23	+ 1.1	+ 1.4	+ 2.7	+ 2.5	+ 2.5	+ 2.5	+ 1.8	+ 2.3	+ 2.6	+ 1.9	+ 1.6	+ 0.8

TABLE X.

*Mean Monthly Elasticity of Vapour for every Two Hours, 1858.*

Month.	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>
January ...	0·189	·195	·187	·174	·165	·170	·171	·179	·169	·172	·173	·180
February ..	·220	·236	·226	·208	·193	·195	·192	·187	·180	·182	·186	·199
March ...	·225	·226	·229	·226	·219	·209	·203	·201	·199	·194	·205	·225
April .....	·194	·195	·190	·183	·179	·178	·178	·177	·177	·180	·187	·194
May .....	·318	·308	·306	·308	·314	·316	·310	·304	·311	·323	·317	·327
June .....	·405	·403	·394	·396	·396	·384	·372	·360	·355	·379	·400	·390
July .....	·339	·339	·341	·346	·360	·358	·346	·342	·336	·340	·351	·340
August ...	·370	·394	·396	·389	·400	·390	·387	·387	·381	·381	·391	·402
September	·427	·419	·419	·440	·418	·411	·397	·387	·379	·379	·403	·420
October ...	·313	·310	·309	·312	·304	·302	·298	·303	·298	·297	·302	·316
November.	·228	·224	·229	·217	·213	·213	·208	·204	·201	·200	·205	·215
December.	·237	·236	·233	·228	·226	·223	·227	·221	·218	·218	·219	·226
Means ...	0·289	·290	·288	·286	·282	·279	·274	·271	·267	·270	·277	·286

The yearly means of the numbers under the different hours may be represented pretty accurately by the formula

$$E_x = 0\cdot280 + 0\cdot011 \sin (x + 46^\circ 56') + 0\cdot002 \sin (2x + 116^\circ 34').$$

Subtracting the values of the Elasticity of Vapour given above from the corresponding numbers in Table I, we obtain the numbers in the following Table.

TABLE XI.

*Mean Monthly Pressures of Dry Air for every Two Hours, 1858.*

Month.	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>	Mean.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	29·916	·901	·915	·937	·952	·941	·934	·921	·923	·919	·929	·936	29·927
February..	·575	·540	·545	·580	·603	·606	·604	·602	·600	·597	·606	·594	·588
March ...	·517	·494	·482	·490	·507	·519	·527	·526	·520	·530	·532	·526	·514
April .....	·539	·525	·527	·532	·547	·552	·554	·534	·525	·533	·538	·532	·537
May .....	·394	·393	·395	·399	·409	·416	·425	·431	·424	·423	·435	·424	·414
June .....	·462	·457	·450	·450	·461	·491	·501	·507	·513	·497	·480	·488	·480
July .....	·404	·393	·381	·374	·368	·381	·389	·388	·395	·399	·396	·405	·389
August ...	·413	·374	·360	·368	·373	·392	·391	·380	·381	·386	·384	·371	·381
September	·376	·370	·363	·349	·388	·395	·412	·415	·413	·422	·412	·403	·393
October ...	·471	·464	·461	·474	·495	·502	·503	·489	·489	·494	·505	·494	·487
November.	·478	·463	·455	·477	·490	·489	·487	·484	·476	·477	·484	·481	·478
December.	·466	·456	·467	·479	·488	·500	·503	·515	·519	·517	·520	·518	·496
Mean .....	29·501	·486	·483	·492	·507	·515	·519	·516	·515	·516	·518	·514	29·507

The yearly means may be represented as usual by the formula

$$P_x = 29·507 + 0·016 \sin(x + 216^\circ 46') + 0·009 \sin(2x + 161^\circ 56').$$



TABLE XII.

*Mean Monthly Directions of the Wind for every Two Hours, derived from the Indications of the Anemograph, 1858.*

Month.	Hours from Noon.											
	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>
January .....	277	281	256	255	240	252	252	259	268	279	266	277
February ...	63	60	60	60	59	59	55	55	53	52	57	64
March .....	307	308	305	310	314	306	293	312	298	297	298	294
April .....	74	53	56	66	65	77	72	70	72	70	57	89
May .....	287	279	292	290	281	287	267	267	269	284	292	286
June .....	289	297	316	313	308	298	294	277	276	289	294	272
July .....	277	287	286	278	280	273	278	273	271	266	283	290
August .....	274	283	285	282	267	252	245	244	246	255	271	254
September ...	206	210	218	211	202	212	216	216	216	212	219	203
October .....	270	258	275	285	285	286	267	275	271	275	273	275
November ...	56	57	54	54	53	51	44	40	37	35	36	32
December ...	217	212	211	214	210	217	217	218	216	205	204	206
Means .....	287	293	308	312	309	294	285	293	289	285	296	283

TABLE XIII.

*Ratio of the Mean Monthly Velocity of the Wind for every Two Hours, estimated in the Directions given in the preceding Table, to the actual Daily Velocity of the Wind (supposed uniform) blowing from various quarters.*

Month, 1858.	Hours from Noon.											
	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>
January .....	0.26	0.25	0.26	0.23	0.23	0.25	0.25	0.18	0.18	0.20	0.22	0.28
February ...	0.57	0.59	0.60	0.62	0.62	0.62	0.60	0.60	0.60	0.61	0.53	0.61
March .....	0.39	0.41	0.32	0.24	0.28	0.32	0.35	0.42	0.34	0.33	0.34	0.39
April .....	0.21	0.21	0.39	0.50	0.54	0.46	0.49	0.48	0.49	0.43	0.34	0.37
May .....	0.43	0.37	0.32	0.24	0.18	0.21	0.20	0.21	0.21	0.26	0.30	0.37
June .....	0.27	0.32	0.32	0.37	0.40	0.36	0.37	0.44	0.48	0.43	0.38	0.20
July .....	0.60	0.50	0.36	0.37	0.43	0.43	0.47	0.51	0.52	0.54	0.58	0.54
August .....	0.39	0.46	0.41	0.38	0.36	0.38	0.39	0.38	0.34	0.38	0.40	0.37
September ...	0.36	0.33	0.29	0.29	0.29	0.31	0.29	0.27	0.35	0.41	0.34	0.39
October .....	0.26	0.31	0.30	0.32	0.24	0.25	0.17	0.19	0.18	0.21	0.18	0.25
November ...	0.62	0.62	0.64	0.63	0.61	0.62	0.53	0.63	0.62	0.57	0.66	0.63
December ...	0.50	0.54	0.53	0.57	0.53	0.50	0.51	0.50	0.54	0.55	0.57	0.57

TABLE XIV.

*Mean Monthly Bi-hourly Velocities of the Wind in 1858.*

Month.	Velocities in the Bi-hourly Intervals.											
	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.	h. h.
	0—2	2—4	4—6	6—8	8—10	10—12	12—14	14—16	16—18	18—20	20—22	22—0
1858.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
January .....	11'48	10'57	9'10	8'64	8'95	9'03	9'07	9'16	8'62	8'72	9'28	11'02
February .....	15'04	14'37	12'25	9'88	10'04	8'65	7'96	8'83	8'96	10'37	9'94	13'67
March .....	16'45	14'37	12'03	11'03	10'37	10'52	10'43	10'50	10'80	11'80	13'27	15'83
April .....	14'95	15'45	13'76	11'03	9'43	9'22	8'86	8'66	8'47	11'09	11'52	14'55
May .....	15'98	15'85	13'71	10'03	6'95	7'27	7'06	6'40	7'68	10'29	11'89	15'48
June .....	8'95	9'22	7'77	6'10	4'22	3'62	4'13	3'62	4'35	6'33	8'35	9'30
July .....	12'30	11'18	10'70	7'95	5'08	6'07	6'68	5'95	6'13	7'90	9'03	12'23
August .....	19'73	19'78	17'42	12'98	11'54	11'36	10'49	10'39	10'99	15'03	16'57	20'27
September .....	24'92	24'08	21'40	17'60	16'80	15'88	16'64	16'35	15'92	16'56	19'60	25'32
October .....	23'49	19'99	17'71	17'91	16'71	18'11	19'44	19'23	18'45	19'12	20'76	24'12
November .....	24'63	21'65	19'77	19'65	17'90	17'22	16'90	17'21	18'42	16'75	18'00	23'11
December .....	21'91	21'29	22'41	23'34	22'22	21'45	21'79	21'25	19'16	17'61	19'74	25'97
Means. (January to July.)	13'59	13'00	11'33	9'24	7'86	7'77	7'74	7'59	7'86	9'50	10'47	13'15
Means. (August to December.)	22'94	21'36	19'74	18'30	17'03	16'80	17'05	16'89	16'59	17'01	18'93	23'76
Relative Velocities. (January to July.)	1'370	1'310	1'143	0'932	0'792	0'783	0'781	0'765	0'792	0'958	1'056	1'326
Relative Velocities. (August to December.)	1'216	1'132	1'046	0'970	0'902	0'890	0'903	0'895	0'879	0'901	1'003	1'259

The relative velocities for the first and second portions of the year may be thus represented by formulæ:

$$V_{x_1} = 1 + 0.307 \sin(x + 89^\circ) + 0.077 \sin(2x + 84^\circ),$$

$$V_{x_2} = 1 + 0.162 \sin(x + 86^\circ) + 0.072 \sin(2x + 102^\circ).$$

TABLE XV.

*Principal Changes of the Wind during the Year 1858.*

Interval of Time.			Amount of Change.		Interval of Time.			Amount of Change.	
			Direct.	Retrograde.				Direct.	Retrograde.
d. h. d. h.			°	°	d. h. d. h.			°	°
Jan. 2 0 to 3 14			146		April 1 10 to 7 0			461	
3 14 " 5 22				90	7 0 " 11 8				124
5 22 " 9 12			191		11 8 " 19 22			506	
9 12 " 9 20				67	19 22 " 21 20				101
9 20 " 13 18			146		21 20 " 30 22			574	
13 18 " 15 22				68	Sums .....			1541	225
15 22 " 17 22			146						
17 22 " 19 4				146	May 1 0 to 3 4			180	
20 10 " 24 22			22		3 4 " 3 20				79
24 22 " 28 20				157	3 20 " 4 20			56	
28 20 " 31 6			157		4 20 " 5 16				56
31 6 " 31 22				45	5 16 " 9 12			135	
Sums .....			808	573	9 12 " 12 18				112
					12 18 " 13 10			326	
Feb. 1 0 to 2 20			34		13 10 " 14 6				248
2 20 " 3 10				146	14 6 " 14 14			157	
3 10 " 5 4			79		14 14 " 14 22				90
5 4 " 16 4				247	14 22 " 20 4			90	
16 4 " 21 16			101		20 4 " 20 20				79
21 16 " 28 22				68	20 20 " 24 4			79	
Sums .....			214	461	24 4 " 26 12				405
					26 12 " 27 22			112	
Mar. 1 0 to 9 20				169	27 22 " 30 22				146
9 20 " 11 22			90		30 22 " 31 22			68	
11 22 " 14 4				90	Sums .....			1203	1215
14 4 " 14 16			67						
14 16 " 14 22				67	June 1 0 to 4 20				56
16 22 " 17 20			45		4 20 " 9 4			202	
17 20 " 21 22				259	9 4 " 9 16				146
21 22 " 27 22			652		9 16 " 12 18			382	
27 22 " 29 18				157	12 18 " 12 22				135
29 18 " 30 4			90		12 22 " 13 16			67	
30 4 " 31 10				113	13 16 " 15 22				124
31 10 " 31 22			225		15 22 " 18 20			225	
Sums .....			1169	855	18 20 " 30 22				416
					Sums .....			876	877

Interval of Time.		Amount of Change.		Interval of Time.		Amount of Change.	
		Direct.	Retrograde.			Direct.	Retrograde.
d. h.	d. h.	°	°	d. h.	d. h.	°	°
July 1 0 to 3 18		67		Oct. 1 0 to 6 14			67
3 18 „ 16 18			529	6 14 „ 8 10		135	
16 18 „ 16 22		158		8 10 „ 16 0			56
16 22 „ 17 22			169	16 0 „ 22 22		270	
17 22 „ 19 4		157		22 22 „ 31 22			371
19 4 „ 22 18			180				
22 18 „ 26 0		101		Sums .....		405	494
26 0 „ 31 22			270				
Sums .....		483	1148	Nov. 1 0 to 3 6		56	
				3 6 „ 8 16			79
Aug. 1 0 to 8 0		281		8 16 „ 12 8		135	
8 0 „ 10 22			56	12 8 „ 22 22			90
10 22 „ 14 8		349		22 22 „ 30 22		270	
14 8 „ 18 4			202	Sums .....		461	169
21 12 „ 28 20		90					
28 20 „ 31 22			101	Dec. 1 0 to 3 22			67
Sums .....		720	359	3 22 „ 30 16		832	
				30 16 „ 31 22			124
Sept. 1 0 to 8 14		101		Sums .....		832	191
8 14 „ 14 14			270				
14 14 „ 24 22		506					
24 22 „ 25 22			67				
25 22 „ 26 22		67					
26 22 „ 27 16			79				
27 16 „ 28 20		101					
28 20 „ 29 14			191				
29 14 „ 30 22		90					
Sums .....		865	607				

From the Table given above it will be easily seen that the excess of direct motion above retrograde motion for the several months, was as follows :

January 235	May — 12	September 258
February — 247	June — 1	October — 89
March 314	July — 665	November 292
April 1316	August 361	December 641

And, for the year, the whole excess of direct motion was 2403°.

TABLE XVI.

*Relations of Pressure, Temperature, &c., under different Winds.*

NORTH.									
Mean Day..	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 2	30·246	39·3	38·3	— 0·221	— 0·096	29·929	+ 11·9	51·2	1
Feb. 15	29·849	36·1	35·8	— 0·207	— 0·078	29·564	+ 9·6	45·7	2
Mar. 18	29·894	39·0	36·4	— 0·188	— 0·062	29·644	+ 6·9	45·9	4
April 15	29·804	45·7	42·2	— 0·232	— 0·043	29·529	+ 3·5	49·2	7
May 11	29·762	50·5	44·6	— 0·234	— 0·005	29·523	— 3·0	47·5	4
June 17	30·010	61·5	54·3	— 0·336	+ 0·088	29·762	— 10·4	51·1	5
July 13	29·837	56·4	50·7	— 0·304	+ 0·126	29·659	— 11·8	44·6	7
Aug. 8	30·043	62·1	56·5	— 0·385	+ 0·086	29·744	— 10·7	51·4	3
Sept. 28	29·933	57·4	56·1	— 0·432	+ 0·042	29·543	— 5·0	52·4	1
Oct. 25	29·977	47·1	45·2	— 0·279	+ 0·027	29·725	+ 1·3	48·4	11
Nov. 11	30·035	39·2	37·1	— 0·199	— 0·008	29·828	+ 5·2	44·4	7
Dec. 14	30·066	34·8	34·6	— 0·200	— 0·071	29·795	+ 8·3	43·1	1
Mean ...	29·955	47·4	44·3	— 0·268	0·000	29·687	+ 0·5	47·9	Sum = 53
NORTH EAST.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 11	30·263	33·5	32·7	— 0·176	— 0·096	29·991	+ 12·5	46·0	3
Feb. 19	29·828	33·4	33·3	— 0·191	— 0·078	29·559	+ 9·4	42·8	15
Mar. 12	29·886	36·8	35·0	— 0·185	— 0·062	29·639	+ 7·7	44·5	6
April 15	29·802	44·3	41·1	— 0·223	— 0·043	29·536	+ 3·1	47·4	13
May 7	29·909	47·1	44·0	— 0·252	— 0·005	29·652	— 2·6	44·5	6
June 13	29·785	63·8	57·5	— 0·392	+ 0·088	29·481	— 9·6	54·2	5
July 28	29·752	57·1	51·9	— 0·324	+ 0·126	29·554	— 12·4	44·7	3
Aug. 8	30·025	63·5	57·6	— 0·397	+ 0·086	29·714	— 12·4	51·1	4
Sept. 16	29·963	59·7	57·0	— 0·427	+ 0·042	29·578	— 7·0	52·7	4
Oct. 28	29·990	43·5	41·3	— 0·236	+ 0·027	29·781	— 0·5	43·0	1
Nov. 13	29·845	36·6	34·6	— 0·180	— 0·008	29·657	+ 5·6	42·2	17
Dec. 7	30·026	36·6	35·6	— 0·199	— 0·071	29·756	+ 7·8	44·4	1
Mean ...	29·923	46·3	43·5	— 0·265	0·000	29·658	+ 0·1	46·5	Sum = 78

TABLE XVI (continued).

*Relations of Pressure, Temperature, &c., under different Winds.*

EAST.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 4	30.264	31.7	30.6	— 0.153	— 0.096	30.015	+ 11.9	43.6	2
Feb. 16	29.834	32.5	32.6	— 0.185	— 0.078	29.571	+ 7.9	40.4	10
Mar. 23	30.201	44.8	41.0	— 0.216	— 0.062	29.923	+ 6.3	51.1	3
April 11	29.723	44.8	41.5	— 0.226	— 0.043	29.454	+ 3.8	48.6	9
May 10	29.731	46.4	40.5	— 0.194	— 0.005	29.532	— 2.9	43.5	6
June 8	29.710	64.2	58.1	— 0.404	+ 0.088	29.394	— 8.9	55.3	2
July 27	29.554	59.2	55.5	— 0.392	+ 0.126	29.288	— 12.4	46.8	1
Aug. 8	30.134	61.0	54.4	— 0.344	+ 0.086	29.876	— 12.4	48.6	1
Sept. 17	29.852	61.2	57.8	— 0.431	+ 0.042	29.463	— 6.8	54.4	4
October	...	...	...	.....	.....	...	.....	...	0
Nov. 15	29.572	37.1	34.0	— 0.164	— 0.008	29.400	+ 5.8	42.9	5
Dec. 11	29.985	37.3	36.2	— 0.201	— 0.071	29.713	+ 8.0	45.3	2
Mean ...	29.869	47.3	43.8	— 0.265	— 0.003	29.602	+ 0.0	47.3	Sum = 45
SOUTH EAST.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 17	29.997	33.7	33.1	— 0.181	— 0.096	29.720	+ 11.2	44.9	5
Feb. 7	29.826	37.8	37.3	— 0.222	— 0.078	29.526	+ 9.8	47.3	2
Mar. 13	29.758	42.2	40.2	— 0.227	— 0.062	29.469	+ 7.4	49.6	2
April 17	29.882	49.7	44.7	— 0.241	— 0.043	29.598	+ 2.3	52.0	4
May 24	29.451	49.5	47.0	— 0.292	— 0.005	29.154	— 5.0	44.5	1
June 18	29.923	71.9	63.2	— 0.461	+ 0.088	29.550	— 10.4	61.5	2
July	...	...	...	.....	.....	...	.....	...	0
Aug. 6	29.899	65.3	59.9	— 0.440	+ 0.086	29.545	— 12.4	52.9	2
Sept. 19	29.576	63.2	60.2	— 0.477	+ 0.042	29.141	— 6.2	57.0	2
Oct. 16	29.720	55.8	54.1	— 0.396	+ 0.027	29.351	— 1.2	54.6	3
Nov. 24	29.445	34.3	33.6	— 0.184	— 0.008	29.253	+ 7.3	41.6	1
Dec. 12	29.954	38.5	37.1	— 0.206	— 0.071	29.677	+ 8.1	46.6	5
Mean ...	29.766	49.2	46.4	— 0.302	— 0.010	29.453	+ 1.0	50.2	Sum = 29

TABLE XVI (continued).

*Relations of Pressure, Temperature, &c., under different Winds.*

SOUTH.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 19	30·029	36·5	36·0	— 0·206	— 0·096	29·727	+ 11·2	47·7	5
Feb. 5	29·687	42·8	42·6	— 0·270	— 0·078	29·339	+ 9·8	52·6	3
Mar. 20	29·789	43·2	40·6	— 0·224	— 0·062	29·503	+ 6·9	50·1	4
April 14	29·702	45·2	42·0	— 0·231	— 0·043	29·428	+ 3·5	48·7	4
May 24	29·698	59·7	55·5	— 0·386	— 0·005	29·307	— 5·0	54·7	4
June 14	29·909	66·5	58·6	— 0·391	+ 0·088	29·606	— 9·6	56·9	4
July 18	29·698	63·7	57·9	— 0·403	+ 0·126	29·421	— 12·0	51·7	2
Aug. 13	29·591	63·1	59·0	— 0·442	+ 0·086	29·235	— 12·2	50·9	4
Sept. 13	29·681	62·0	59·0	— 0·456	+ 0·042	29·267	— 7·0	55·0	9
Oct. 9	29·736	53·7	50·9	— 0·335	+ 0·027	29·428	— 2·2	51·5	10
Nov. 27	28·974	49·4	47·8	— 0·312	— 0·008	28·654	+ 7·6	57·0	5
Dec. 15	29·804	42·1	40·7	— 0·238	— 0·071	29·495	+ 8·3	50·4	7
Mean ...	29·692	52·3	49·2	— 0·324	0·000	29·368	+ 0·0	52·3	Sum = 61
SOUTH WEST.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 13	30·066	42·9	41·8	— 0·252	— 0·096	29·718	+ 12·5	55·4	11
Feb. 4	29·502	43·1	43·0	— 0·276	— 0·078	29·148	+ 9·9	53·0	2
Mar. 23	29·649	46·4	43·8	— 0·256	— 0·062	29·331	+ 6·3	52·7	7
April 25	29·408	49·5	47·2	— 0·297	— 0·043	29·068	+ 0·9	50·4	4
May 22	29·718	56·3	53·1	— 0·364	— 0·005	29·349	— 5·0	51·3	13
June 12	29·811	63·9	57·7	— 0·396	+ 0·088	29·503	— 9·6	54·3	8
July 22	29·624	61·0	55·1	— 0·361	+ 0·126	29·389	— 12·3	48·7	17
Aug. 17	29·698	60·7	56·1	— 0·394	+ 0·086	29·390	— 11·6	49·1	10
Sept. 10	29·719	58·7	56·1	— 0·414	+ 0·042	29·347	— 7·8	50·9	12
Oct. 10	29·592	50·0	47·5	— 0·298	+ 0·027	29·321	— 2·2	47·8	11
Nov. 26	29·298	43·5	42·1	— 0·252	— 0·008	29·038	+ 7·3	50·8	3
Dec. 18	29·462	44·9	42·9	— 0·252	— 0·071	29·139	+ 9·5	54·4	15
Mean ...	29·629	51·7	48·9	— 0·318	0·000	29·312	— 0·2	51·6	Sum = 113

TABLE XVI (concluded).

*Relations of Pressure, Temperature, &c., under different Winds.*

WEST.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 18	30°003	42°4	40°9	— 0°239	— 0°096	29°668	+ 11°2	53°6	12
February	...	...	...	.....	.....	...	.....	...	0
Mar. 15	29°527	42°1	40°2	— 0°228	— 0°062	29°237	+ 7°4	49°5	15
April 22	29°351	47°6	45°9	— 0°288	— 0°043	29°020	+ 0°9	48°5	4
May 19	29°651	52°8	50°0	— 0°325	— 0°005	29°321	— 4°2	48°6	12
June 18	29°837	62°2	55°6	— 0°360	+ 0°088	29°565	— 10°4	51°8	9
July 15	29°734	60°8	54°3	— 0°343	+ 0°126	29°517	— 12°0	48°8	15
Aug. 16	29°737	60°7	56°1	— 0°390	+ 0°086	29°433	— 11°6	49°1	13
Sept. 22	29°946	54°2	52°1	— 0°361	+ 0°042	29°627	— 6°2	48°0	5
Oct. 7	29°539	47°2	44°4	— 0°260	+ 0°027	29°306	— 3°5	43°7	3
Nov. 3	29°269	44°3	41°4	— 0°229	— 0°008	29°032	+ 3°6	47°9	1
Dec. 23	29°696	40°6	38°8	— 0°218	— 0°071	29°407	+ 10°1	50°7	7
Mean ...	29°663	50°4	47°2	— 0°295	+ 0°007	29°376	— 1°2	49°1	Sum = 96
NORTH WEST.									
Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1858.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 22	30°061	34°9	34°7	— 0°196	— 0°096	29°769	+ 10°4	45°3	7
Feb. 2	29°676	30°7	30°7	— 0°172	— 0°078	29°426	+ 9°9	40°6	2
Mar. 14	29°600	39°9	37°8	— 0°204	— 0°062	29°334	+ 7°4	47°3	8
April	...	...	...	.....	.....	...	.....	...	0
May 11	29°640	48°1	44°9	— 0°260	— 0°005	29°375	— 3°3	44°8	3
June 21	29°914	63°0	59°1	— 0°446	+ 0°088	29°556	— 10°7	52°3	9
July 9	29°783	56°5	50°3	— 0°296	+ 0°126	29°613	— 11°4	45°1	8
Aug. 22	29°819	57°8	52°8	— 0°339	+ 0°086	29°566	— 10°7	47°1	8
Sept. 19	30°028	54°9	52°0	— 0°350	+ 0°042	29°720	— 6°2	48°7	4
Oct. 23	29°963	49°1	47°4	— 0°307	+ 0°027	29°683	+ 0°8	49°9	4
Nov. ...	...	...	...	.....	.....	...	.....	...	0
Dec. 13	29°968	37°5	36°2	— 0°199	— 0°071	29°698	+ 8°3	45°8	4
Mean ...	29°845	47°2	44°6	— 0°277	+ 0°005	29°574	— 0°5	46°7	Sum = 57



TABLE XVII.

*Amount of Rain on the Ground and at an Elevation of 22 Feet,  
for every Month of the Year 1858.*

Month, 1858.	Monthly amount of Rain collected.		
	On the Ground.	At an Ele- vation of 22 feet.	Ratio.
	Inches.	Inches.	
January .....	0·672	0·625	1·072
February .....	1·773	1·418	1·250
March .....	0·790	0·568	1·390
April .....	3·545	2·855	1·242
May .....	2·320	2·007	1·156
June .....	1·590	1·347	1·180
July .....	2·274	1·880	1·210
August .....	1·426	1·235	1·138
September ...	2·508	2·169	1·129
October .....	1·970	1·637	1·203
November ...	0·697	0·635	1·097
December ...	2·125	1·983	1·061
Sum or Mean	21·690	18·359	1·181

TABLE XVIII.

*Fall of Rain distributed under different Winds, for every Month of the Year 1858.*

Mean Day.	N		NNE		NE		ENE		E		ESE		SE		SSE		Sum	
	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.
1858.	in.		in.		in.		in.		in.		in.		in.		in.		in.	
Jan.	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0
Feb.	0'00	0	0'00	0	0'96	5	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'96	5
March	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'07	1	0'07	1
April	1'10	1	0'04	2	0'00	0	0'36	1	1'60	3	0'00	0	0'00	0	0'00	0	3'10	7
May	0'14	2	0'00	0	0'02	1	0'00	0	0'10	2	0'80	1	0'00	0	0'00	0	1'06	6
June	0'00	0	0'00	0	0'00	0	0'46	1	0'00	0	0'00	0	0'00	0	0'00	0	0'46	1
July	0'02	1	0'00	0	0'00	0	0'80	1	0'00	0	0'00	0	0'00	0	0'00	0	0'82	2
Aug.	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'29	1	0'00	0	0'29	1
Sept.	0'00	0	0'00	0	0'46	1	0'00	0	0'52	1	0'00	0	0'00	0	0'17	1	1'15	3
Oct.	0'20	2	0'11	1	0'00	0	0'00	0	0'00	0	0'00	0	0'28	1	0'00	0	0'59	4
Nov.	0'03	2	0'00	0	0'03	1	0'00	0	0'00	0	0'01	1	0'00	0	0'00	0	0'07	4
Dec.	0'01	1	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'36	1	0'04	1	0'41	3
Sum	1'50	9	0'15	3	1'47	8	1'62	3	2'22	6	0'81	2	0'93	3	0'28	3	8'98	37

Mean Day.	S		SSW		SW		WSW		W		WNW		NW		NNW		Sum	
	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.	Fall.	Days.
1858.	in.		in.		in.		in.		in.		in.		in.		in.		in.	
Jan.	0'00	0	0'10	1	0'08	1	0'26	4	0'00	0	0'24	1	0'00	0	0'00	0	0'68	7
Feb.	0'00	0	0'48	1	0'07	1	0'00	0	0'00	0	0'00	0	0'26	1	0'00	0	0'81	3
March	0'00	0	0'00	0	0'00	0	0'41	3	0'08	3	0'14	2	0'00	0	0'10	1	0'73	9
April	0'27	2	0'00	0	0'00	0	0'09	2	0'09	1	0'00	0	0'00	0	0'00	0	0'45	5
May	0'30	1	0'00	0	0'00	0	0'64	5	0'23	1	0'12	1	0'00	0	0'00	0	1'29	8
June	0'33	1	0'00	0	0'00	0	0'00	0	0'20	1	0'06	1	0'00	0	0'00	0	0'59	3
July	0'00	0	0'01	1	0'72	4	0'51	3	0'01	1	0'00	0	0'00	0	0'03	1	1'28	10
Aug.	0'26	2	0'00	0	0'08	1	0'14	2	0'61	2	0'00	0	0'05	1	0'00	0	1'14	8
Sept.	0'52	2	0'16	1	0'71	5	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	1'39	8
Oct.	0'04	2	0'13	1	0'72	3	0'28	2	0'00	0	0'00	0	0'20	1	0'02	1	1'39	10
Nov.	0'39	3	0'24	2	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'00	0	0'63	5
Dec.	0'14	1	0'65	2	0'75	8	0'08	2	0'01	1	0'02	2	0'01	1	0'00	0	1'66	17
Sum	2'25	14	1'77	9	3'13	23	2'41	23	1'23	10	0'58	7	0'52	4	0'15	3	12'04	93

TABLE XIX.

*Readings of two Thermometers during the Annular Eclipse of the Sun  
on March 14-15, 1858.*

Mean Solar Time.	Black Bulb Thermometer in the Sun.	Air Thermometer in the Shade.	Excess of Black Bulb.
1858. d. h. m.	°	°	°
March 14 23 30	62.7	58.0	+ 4.7
40	56.6	52.0	+ 4.6
50	54.9	51.4	+ 3.5
15 0 0	53.2	51.0	+ 2.2
10	52.2	50.9	+ 1.3
20	51.9	50.6	+ 1.3
30	50.6	50.3	+ 0.3
40	49.7	49.9	— 0.2
50	49.3	49.8	— 0.5
1 0	49.1	49.6	— 0.5
10	49.4	49.5	— 0.1
20	49.7	49.5	+ 0.2
30	50.1	49.6	+ 0.5
40	50.7	49.8	+ 0.9
50	51.0	50.0	+ 1.0
2 0	50.7	50.0	+ 0.7
10	50.3	49.9	+ 0.4
20	50.1	49.7	+ 0.4
30	49.1	48.2	+ 0.9
<p>March 14. At 23<sup>h</sup> 30<sup>m</sup> clouds passing from N. W. cumuli and scud.</p> <p>15. At 0<sup>h</sup> 54<sup>m</sup> the greatest darkness; chill- ing wind at 1<sup>h</sup>.</p> <p>15. At 2<sup>h</sup> 20<sup>m</sup> drizzle.</p>			

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